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Ontario. Legislative Assembly

SESSIONAL PAPERS.

107

VOL. XXVIII.—PART VII.

SECOND SESSION EIGHTH LEGISLATURE

OF THE

PROVINCE OF ONTARIO.

SESSION 1896.

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1896.

LIST OF SESSIONAL PAPERS.

ARRANGED ALPHABETICALLY.

TITLE.	No.	REMARKS.
Accounts, Public	3	*Printed.*
Actions and References, pending	58	*Not printed.*
Agricultural College, Report	18	*Printed.*
Agriculture and Arts, Report	28	"
Archæological, Report (part of)	2	"
Asylums, Report	11	"
Bee-Keepers' Association, Report	22	*Printed.*
Births, Marriages and Deaths, Report	30	"
Blind Institute, Report	15	"
Bonds and Securities	59	*Not printed.*
Burlington Beach, correspondence	70	"
Cattle Breeders' Association	27	*Printed.*
Central Prison, Stock in Industrial Department	61	"
do agreement *re* binder twine	65	"
do cost of machinery *re* binder twine	67	"
do Massie charges	69	*Not printed.*
Childrens' Protection Act, Report	17	*Printed.*
Crown Lands, Report	5	"
Dairymen and Creameries, Report	24	*Printed.*
Deaf and Dumb Institute, Report	16	"
Division Courts, Report	7	"
Dominion Cattle Breeders' Association, Report	27	"
Doyle, Judge, Surrogate fees	42	*Not printed.*
Dysart, water lot	49	"
Education, Orders in Council in 1895	50	*Printed.*
do Ottawa Separate Schools	1	"
do Report	2	"
do affiliation, School of Pedagogy	64	"
do publication of Writing Course	71	"
do do Physical Science	72	"
do do Readers	73	"
do Normal Schools in London	52	*Not printed.*
do children passing leaving examinations	80	"

TITLE.	No.	REMARKS.
Elections, return from Records of	41	*Printed.*
Elgin House of Industry Report	54	*Not printed.*
Elliott, Junior Judge, Surrogate fees	66	"
Entomological Society, Report	4	*Printed.*
Estimates	19	"
Factories, Report	29	*Printed.*
Farmers' Institutes, Report	25	"
Forestry, Report	40	"
Fruit, Experiment Stations	21	"
" Growers', Report	20	"
Game and Fish, Report	33	*Printed.*
Gaols, Common, Report	12	"
Hazelwood and Whalen, pulpwood agreement	74	*Not printed.*
Health, Report	35	*Printed.*
Hospitals, Report	14	"
Immigration, Report	36	*Printed*
Industries, Bureau, Report	6	"
Insurance, Report	10	"
Jones, Judge, commutation	43	*Not printed.*
Legal Offices, Report	31	*Printed.*
Library Report	78	"
License Commissioners, names, etc	47	*Not printed.*
Medical Council, prosecutions	48	*Not printed.*
Mosgrove, Judge, Surrogate fees	44	"
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Murdock, William	81	*Not printed.*
Normal Schools in London	52	*Not printed.*
Ottawa Separate Schools, Report	1	*Printed.*
Printing and Binding, amounts paid for	76	*Not printed.*
Poultry and Pet Stock, Report	23	*Printed.*
Public Accounts	3	"
Public Officers	63	*Not printed.*
Public Works, Report	9	*Printed.*
Pulpwood agreement	74	*Not printed.*
Queen Victoria Niagara Falls Park, Report	32	*Printed.*
Quiball, Police Magistrate	53	*Not printed.*
Refuge, Houses of	13	*Printed.*

Title.	No.	Remarks.
Registrar's fees	62	*Printed.*
Secretary and Registrar's Report	77	"
Sheep and Swine Breeders', Report	26	"
Smith, John W., Bailiff in Peel	56	*Not printed.*
Statutes, distribution	46	"
Stephenson, lands flooded in	60	"
Tavern and Shop Licenses, Report	8	*Printed.*
Titles, Report of Master of	55	"
Toronto General Trusts Company	57	*Not printed.*
Toronto University, Auditor's Report	37	*Printed.*
do Discipline Report	38	"
do Finance Report	39	"
do positions on staff	51	*Not printed.*
do applications for professorships	75	"
do affiliation with Oxford and Cambridge	79	*Printed.*
Upper Canada College, Report	45	*Not printed.*

LIST OF SESSIONAL PAPERS.

Arranged in Numerical Order with their Titles at full length; the dates when Ordered and when presented to the Legislature; the name of the Member who moved the same, and whether Ordered to be Printed or not.

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No. 1.. Report of the Commission relating to the Ottawa Separate Schools. Presented to the Legislature 12th February, 1896 (*Printed.*)

No. 2.. Report of the Minister of Education of the year 1895, with the Statistics of 1894. Presented to the Legislature 27th February, 1896. (*Printed.*)

No. 3.. Public Accounts of the Province for the year 1895. Presented to the Legislature 17th February, 1896. (*Printed.*)

No. 4.. Estimates for the Service of the Province until after Estimates of the year are finally passed. Presented to the Legislature 18th February, 1896. (*Not printed.*) Estimates for the year 1896. Presented to the Legislature 19th February, 1896. (*Printed.*) Estimates (supplementary) for the year 1896. Presented to the Legislature 1st April, 1896. (*Printed.*)

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No. 5.. Report of the Commissioner of Crown Lands for the year 1895. Presented to the Legislature 13th March. (*Printed.*)

No. 6.. Report of the Department of Immigration for the year 1895. Presented to the Legislature 20th March, 1896. (*Printed.*)

No. 7.. Report of the Inspector of Division Courts for the year 1895. Presented to the Legislature 20th March, 1896. (*Printed.*)

No. 8.. Report on the working of the Tavern and Shop Licenses Acts for the year 1895. Presented to the Legislature 12th February, 1896. (*Printed.*)

No. 9.. Report of the Commissioner of Public Works for the year 1895. Presented to the Legislature 20th February, 1896. (*Printed.*)

No. 10.. Report of the Inspector of Insurance and Registrar of Friendly Societies for the year 1895. Presented to the Legislature 12th February, 1896. (*Printed.*)

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No. 11.. Report upon the Lunatic and Idiot Asylums of the Province for the year ending 30th September, 1895. Presented to the Legislature 13th February, 1896. (*Printed.*)

No. 12.. Report upon the Common Goals, Prisons and Reformatories of the Province for the year ending 30th September, 1895. Presented to the Legislature 20th February, 1896. (*Printed.*)

No. 13.. Report upon the Houses of Refuge and Orphan and Magdalen Asylums of the Province for the year ending 30th September, 1895. Presented to the Legislature, 12th February, 1896. (*Printed.*)

No. 14.. Report upon the Hospitals of the Province for the year ending 30th September, 1895. Presented to the Legislature 11th March, 1896. (*Printed.*)

No. 15.. Report upon the Institution for the Education of the Blind, Brantford, for the year ending 30th September, 1895. Presented to the Legislature 12th February, 1896. (*Printed.*)

No. 16.. Report upon the Institution for the Education of the Deaf and Dumb, Belleville, for the year ending 30th September, 1895. Presented to the Legislature 12th February, 1896. (*Printed.*)

No. 17.. Report of the Work under the Children's Protection Act for the year 1895. Presented to the Legislature 12th February, 1896. (*Printed.*)

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No. 18.. Report of the Ontario Agricultural College and Experimental Farm and Experimental Union for the year 1895. Presented to the Legislature 6th March, 1896. (*Printed.*)

No. 19.. Report of the Entomological Society of Ontario for the year 1895. Presented to the Legislature 23rd March, 1896. (*Printed.*)

No. 20.. Report of the Fruit Growers' Association of Ontario for the year 1895. Presented to the Legislature 11th March, 1896. (*Printed.*)

No. 21.. Report of the Fruit Experiment Stations of Ontario, for the year 1895. Presented to the Legislature 11th March 1896. (*Printed.*)

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No. 23.. Report of the Poultry and Pet Stock Associations of the Province for the year 1895. Presented to the Legislature 11th March, 1896. (*Printed.*)

No. 24.. Report of the Dairymens and Creameries' Associations of the Province for the year 1895. Presented to the Legislature 11th March 1896. (*Printed.*)

No. 25.. Report of the Superintendent of Farmers' Institutes of the Province for the year 1895. Presented to the Legislature 11th March, 1896. (*Printed.*)

No. 26.. Report of the Sheep and Swine Breeders' Associations of the Province for the year 1895. Presented to the Legislature 11th March, 1896. (*Printed.*)

No. 27... Report of the Dominion Cattle Breeders' Association of the Province for the year 1895. Presented to the Legislature 31st March, 1896. (*Printed.*)

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No. 28... Report of the Agriculture and Arts Association for the year 1895. Presented to the Legislature 31st March, 1896,

No. 29.. Report of the Inspectors of Factories for the Province for the year 1895. Presented to the Legislature 11th March, 1896. (*Printed.*)

No. 30... Report upon the Registration of Births, Marriages and Deaths in the Province for the year 1894. Presented to the Legislature 12th February, 1896. (*Printed.*)

No. 31.. Report of the Inspector of Legal Offices for the year 1895. Presented to the Legislature 20th March, 1896. (*Printed.*)

No. 32.. Report of the Commissioners for the Queen Victoria Niagara Falls Park for the year 1895. Presented to the Legislature 5th March, 1896. (*Printed.*)

No. 33.. Report of the Ontario Game and Fish Commission. Presented to the Legislature 28th February, 1896. (*Printed.*)

No. 34.. Report of the Bureau of Mines for the year 1895. Presented to the Legislature 31st March, 1896. (*Printed.*)

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No. 35.. Report of the Board of Health for the year 1895. Presented to the Legislature 19th March, 1896. (*Printed.*)

No. 36.. Report of the Bureau of Industries for the year 1895. Presented to the Legislature 11th March, 1896. (*Printed.*)

No. 37.. Auditor's Report to the Board of Trustees on Capital and Income Account of the University of Toronto. Presented to the Legislature 12th February, 1896. (*Printed.*)

No. 38.. Report of the Commissioners on the Discipline and other matters in the University of Toronto. Presented to the Legislature 12th February, 1896. (*Printed.*)

No. 39.. Report of the Standing Committee on Finance of the University of Toronto. Presented to the Legislature 12th February, 1896. (*Printed.*)

No. 40.. Report of the Clerk in charge of the Forestry Branch, Crown Lands Department. Presented to the Legislature 31st March, 1896. (*Printed.*)

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No. 41.. Return from the Records of the several Elections to the Legislative Assembly in the Electoral Districts of West Algoma; the North Riding of the County of Brant, Kingston, South Wentworth and West Wellington, since the General Election of 1894, shewing: (1) The number of Votes polled for each Candidate in each Electoral District. (2) The majority whereby each successful Candidate was returned. (3) The total number of Votes polled in each District. (4) The total number of Votes remaining unpolled. (5) The number of names on the Voters' List in each District. (6) The number of Ballot Papers sent out, and how disposed of in each Polling Sub-Division. (7) The number of Tendered Ballots sent out. (8) The population of each District as shown by the last Census. Presented to the Legislature 13th February, 1896. (*Printed.*)

No. 42.. Copy of an Order in Council directing the payment out of the Surplus Surrogate fees of $115. to His Honour Judge Doyle. Presented to the Legislature, 12th February, 1896. (*Not printed.*)

No. 43.. Copy of an Order in Council increasing the commutation paid to His Honour Judge Jones. Presented to the Legislature 12th February, 1896. (*Not printed.*)

No. 44.. Copy of an Order in Council directing the payment out of the Surplus Surrogate fees of $500 to His Honour Judge Mosgrove Presented to the Legislature 12th February, 1896. (*Not printed.*)

No. 45.. Report of the Principal of Upper Canada College shewing the present attendance of pupils and also the statement of the Bursar for the year ending 30th June, 1895. Presented to the Legislature 12th February, 1896. (*Not printed.*)

No. 46.. Statement shewing distribution of Revised and Sessional Statutes for the year 1895. Presented to the Legislature 12th February, 1896. (*Not printed.*)

No. 47.. Return to an Order of the House of the Eleventh day of March, 1895, for a Return shewing the names, occupations and post office addresses of the License Commissioners of the Province for the years 1891-92-93 and 1894. Presented to the Legislature 12th February, 1896. Mr. *Ryerson.* (*Not printed.*)

No. 48.. Return to an Order of the House for the Third day of April, 1895, for a Return shewing the number of prosecutions instituted by agents or detectives of the Medical Council during the year 1894, for violations of the Medical Act, shewing the names of such prosecutors, the names of those prosecuted, the particular offence with which they were charged, and the fine or imprisonment imposed upon those persons convicted. Presented to the Legislature 12th February, 1896. Mr. *Caven.* (*Not printed.*)

No. 49.. Return to an Order of the House of the Third day of April, 1895, for a Return of copies of all applications for the purchase of the water lot in front of lot No. 15 in the 8th Concession of the Township of Dysart, in the County of Haliburton, and of all plans, petitions and correspondence relating to the issue of a patent of such water lot. Presented to the Legislature 12th February, 1896. Mr. *Carnegie.* (*Not printed.*)

No. 50.. Copies of Orders in Council relating to Educational matters approved of during the year 1895. Presented to the Legislature 13th February, 1896. (*Printed.*)

No. 51.. Return to an Order of the House of the Eleventh day of March, 1895, for a Return of copies of all letters received by the Minister of Education, and by other members of the Government, since the first day of January, 1891, recommending persons for positions on the staff of University College, and of the School of Practical Science. Presented to the Legislature 17th February, 1896. Mr. *Whitney.* (*Not printed.*)

No. 52.. Return to an Order of the House of the House of the Twenty-seventh day of March, 1895, for a Return of copies of all correspondence between any member of the Government and any person or persons referring to the establishment of a Normal School in the City of London, and a similar Return referring to the establishment of a Normal School in the Town of Woodstock. Presented to the Legislature 17th February, 1896. Mr. *Whitney.* (*Not printed.*)

No. 53.. Return to an Order of the House of the Third day of April, 1895, for a Return of copies of all correspondence between the Municipality of Sudbury and any member of the Government relating to W. A. Quibell, Police Magistrate of Sudbury. Presented to the Legislature 17th February, 1896. Mr. *Whitney.* (*Not printed.*)

No. 54.. Report of the Inspector of the Elgin House of Industry and Refuge, for the year 1895. Presented to the Legislature 18th February, 1896. (*Not printed.*)

No. 55.. Report of the Master of Titles for the year 1895. Presented to the Legislature 20th February, 1896. (*Printed.*)

No. 56.. Return to an Order of the House of the Tenth day of April, 1895, for a Return of copies of all correspondence, documents and writings, between any member of the Government, or any person or persons and the Government, in connection with the recent appointment of Mr. John W. Smith, of the Town of Brampton, as Bailiff of the First Division Court of the County of Peel, and of the dismissal of Mr. George Broddy. Presented to the Legislature, 21st February, 1896. Mr. *St. John.* (*Not printed.*)

No. 57.. Statement of the affairs of the Toronto General Trusts Company for the year 1895. Presented to the Legislature, 25th February, 1896. (*Not printed.*)

No. 58.. Return to an Order of the House of the Tenth day of April, 1895, for a Return, shewing all actions and references pending before Local Masters which have been pending for more than six months, with the dates, when the matters were brought into the Master's office, the present condition of such matters, and the reasons why same are not disposed of. Mr. *Middleton.* Presented to the Legislature, 27th February, 1896. (*Not printed.*)

No. 59.. Detailed Statement of all Bonds and Securities recorded in the Provincial Registrar's Office since the last return submitted to the Legislative Assembly upon the eighth day of March, A.D. 1895, made in accordance with the provisions of R.S.O., cap. 15. sec. 23. Presented to the Legislature, 28th February, 1896. (*Not printed.*)

No. 60.. Return to an Order of the House of the Twenty-sixth day of February, 1896, for a Return of copies of all correspondence, papers and documents, except that already brought down, between any member or officer of the Government, or any other person or persons, on the subject of claims for damages for the flooding of lands in the Township of Stevenson by the Government dam at the outlet of Mary Lake. Also, copies of all reports made by any Departmental officer, or any other person, to the Government, or any Department thereof, on the subject of such claims, or the damages occasioned by such works. Presented to the Legislature, 5th March, 1896. Mr. *Langford.* (*Not printed.*)

No. 61.. Return to an Order of the House of the Twenty-first day of February, 1896, for a Return shewing (1) the amount of stock on hand in each of the Industrial Departments of the Central Prison, at the stock taking on 30th September, 1894, and on 30th September, 1895. (2) The amount of material purchased for each of said departments during the year ending 30th September, 1895. (3) The amount of wages of all foremen and instructors employed in each of said shops during the year ending 30th September, 1895. (4) The number of days labour of prisoners detailed to each of said shops during said year, shewing the total number detailed whether employed or not. (5) The amount received, and amount still

owing for the produce of said industries sold during the year ending 30th September, 1895, and the amount received during the year ending 30th September, 1895, on account of sales previous to 30th September, 1894. Presented to the Legislature, 5th March, 1896. Mr. *Matheson*. (*Printed.*)

No. 62.. Statement of Returns forwarded to the office of the Provincial Secretary, of all fees and emoluments received by the Registrars of Deeds, for the Province of Ontario, for the year 1895, made in accordance with the provisions of 56 Victoria, cap. 21, sections 117, 120 and 121, and 57 Victoria, cap. 9, sections 6 and 7, with which are contrasted the gross amount of fees for the years 1893 and 1894. Presented to the Legislature, 6th March, 1896. (*Printed.*)

No. 63 . Copy of an Order of His Honour the Lieutenant-Governor in Council approved of the 15th day of August, 1895, approving of the Companies therein mentioned, as Security for Public Officers. Presented to the Legislature, 6th March, 1896. *Not printed.*

No. 64.. Copy of an Agreement, dated Third day of March, 1896, between the Minister of Education and the Board of Education of the City of Hamilton, affiliating the Ontario School of Pedagogy with the Hamilton Collegiate Institute. Presented to the Legislature 9th March, 1896. (*Printed.*)

No. 65.. Copy of an Agreement between the Inspector of Prisons and Public Charities and P. L. O'Connor, relative to the manufacture of binder twine at the Central Prison. Also, of Order in Council approved by His Honour the Lieutenant-Governor on the 1st day of October, 1895, authorizing the said Agreement. Presented to the Legislature 11th March, 1896. (*Printed.*)

No. 66.. Copy of an Order in Council, approved by His Honour the Lieutenant-Governor the 10th day of March, 1896, fixing the amount to be paid to His Honour Judge Elliott, Junior Judge of the County of Middlesex, out of the surplus Surrogate fees for the year 1895. Presented to the Legislature 13th March, 1896. (*Not printed.*)

No. 67.. Return to an Order of the House of the Sixth day of March, 1896, for a Return shewing the cost of the machinery, the cost of repairing and maintaining the same in order, and the cost of raw material used in connection with the manufacture of binder twine in the Central Prison, giving the aggregate amounts for each year from the beginning of the said industry to date; the amounts annually paid as commissions for the sale of the product; the cost of packages, freight, salaries of extra officials and all other expenditures incurred in connection with or occasioned by the said manufacture. The annual receipts from sales of binder twine during the said period, and the estimated value of the machinery, plant, material and stock on hand when the said industry was transferred to its present managers. Presented to the Legislature 13th March, 1896. Mr. *Haycock*. (*Printed.*)

No. 68.. Return to an Order of the House, of the Twenty fifth day of March, 1895, for a Return shewing the municipal indebtedness of the various municipalities of the Province on the 31st December, 1894, under the following heads :—

1. Roads and bridges.
2. Railway bonuses.
3. Aid to manufactures by way of bonus.
4. Municipal waterworks.
5. Waterworks belonging to companies.
6. Gas and electricity.
7. High and Public Schools.
8. Sewers.
9. Other purposes.
10. Also shewing any debenture debt for local improvements, not above included. Presented to the Legislature 23rd March, 1896. Mr. *Gibson* (*Huron.*) (*Printed.*)

No. 69.. Return to an Order of the House, of the Fourth day of March, 1896, for a Return of copies of all correspondence, documents and writings between any Member of the Government, or between any person or persons and the Government, in connection with the recent charges made by James Massie, late Warden of the Central Prison, against certain of the officials of the Prison. Also, for copies of the Commission, or other appointment, and the instructions given to the Commissioners who investigated the charges. Also, for a copy of all evidence taken before the Commissioners at the investigation, and of the report made thereon by the Commissioners. Presented to the Legislature 23rd March, 1896. Mr. *Marter.* (*Not printed.*)

No. 70.. Return to an Order of the House, of the Twenty-sixth day of February, 1896, for a Return of copies of all correspondence between any official of the Corporation of the City of Hamilton and the Department of Crown Lands, or any officer thereof, relating to any question affecting the rights of the City of Hamilton, or any person or persons, to certain portions of Burlington Beach ; also, for a copy of any instructions given to S. H. Jones, Esquire, P. L. S., as to defining the limits of any holding either leased to the City of Hamilton, or sold to any individual occupant ; also, for a copy of plan of survey made by Mr. Jones ; also, for a copy of the original, as well as the subsidiary lease, granted to the City of Hamilton by the Department of Crown Lands. Presented to the Legislature 24th March, 1896. Mr. *Dickenson.* (*Not printed.*)

No. 71... Copy of an Order in Council, approved by His Honour the Lieutenant-Governor, the 26th day of March, A.D. 1896, approving of the accompanying Agreement between the Canada Publishing Company (Limited), Publishers, of the City of Toronto, and Her Majesty the Queen, represented by the Minister of Education for the Province, on behalf of the Educational Department of Ontario, respecting the publication of "The Public School Writing Course, Vertical System," comprising seven separate books, for use in the Public Schools of Ontario. Presented to the Legislature 26th March, 1896. (*Printed.*)

No. 72.. Copy of an Order in Council, approved by His Honour the Lieutenant-Governor, the 26th day of March, A.D. 1896, approving of the accompanying Agreement between The Copp Clark Company (Limited), Publishers of the City of Toronto, and Her Majesty the Queen, represented by the Minister of Education for the Province, on behalf of the Education Department of Ontario, respecting the publication of "The High School Physical Science, Part 2." Presented to the Legislature 26th March, 1896. (*Printed.*)

No. 73.. Copy of an Order in Council, approved by His Honour the Lieutenant-Governor, the 26th day of March, A.D. 1896, approving of the accompanying Agreement between The Copp, Clark Company (Limited), The Canada Publishing Company (Limited) and The W. J. Gage Company (Limited), Publishers, of the City of Toronto, and Her Majesty the Queen, represented by the Minister of Education for the Province, on behalf of the Education Department of Ontario, respecting the publication of Public School Readers, consisting of:—The First Reader, Parts 1 and 2; the Second Reader; the Third Reader; the Fourth Reader and the High School Reader. Presented to the Legislature 26th March, 1896. (*Printed.*)

No. 74.. Return to an Order of the House of the Sixth day of March, 1896, for a Return of Copies of all agreements entered into between the Government and Hazelwood & Whalen, and the Government and G. P. Cleaner, James Whalen and others, respecting the cutting of pulp wood, or other timber, in the territory north of Lake Superior, together with copies of all correspondence in connection with the same. Presented to the Legislature 26th March, 1896. Mr. *Matheson.* (*Not printed.*)

No. 75.. Return to an Order of the House of the First day of April, 1895, for a Return of copies of all advertisements calling for applications for professorships, associate professorships and lectureships in the University of Toronto and University College since the University Federation Act went into force; also, copies of all applications for such advertised positions and of the testimonials in support thereof and in the possession of any Department of the Government; also, copies of all correspondence relating to such vacancies between the Government and any person holding official positions in connection with the management of either of the above institutions. Presented to the Legislature 30th March, 1896. Mr. *Howland.* (*Not printed.*)

No. 76.. Return to an Order of the House of the Eleventh day of March, 1896, for a Return shewing the amounts paid to Warwick Bros. & Rutter for printing and binding for the years 1894 and 1895, respectively, in terms of the agreement of 1893. Presented to the Legislature 30th March, 1896. Mr. *Meacham.* (*Not printed.*)

No. 77.. Report of the Secretary and Registrar of the Province for the year 1895. Presented to the Legislature 31st March, 1896. (*Printed.*)

No. 78.. Report of the Librarian upon the state of the Library. Presented to the Legislature 1st April, 1896. (*Printed.*)

No. 79.. Papers relating to the application of the Senate of the University of Toronto to the Universities of Oxford and Cambridge for the grant of special affiliation privileges. Presented to the Legislature 7th April, 1896. (*Printed.*)

No 80.. Return to an Order of the House of the Sixteenth day of March, 1896, for a Return shewing how many of the children in each City and County, who passed the leaving examination in 1895, are now attending the High Schools. Presented to the Legislature 7th April, 1896. Mr. *Meacham.* (*Not printed.*)

No. 81.. Return to an Order of the House of the Twenty-fifth day of March, 1896, for a Return of copies of all applications and correspondence in favour of and relating to the appointment of William Murdock as Farmer, or Assistant Farmer, at the London Asylum. Presented to the Legislature 7th April, 1896. Mr. *Whitney.* (*Not printed.*)

FOURTEENTH ANNUAL REPORT

OF THE

PROVINCIAL BOARD OF HEALTH

OF ONTARIO,

BEING FOR THE YEAR

1895.

PRINTED BY ORDER OF THE LEGISLATIVE ASSEMBLY.

TORONTO:
WARWICK BRO'S & RUTTER, PRINTERS, ETC., 68 AND 70 FRONT ST. WEST.
1896.

MEMBERS

OF THE

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C. W. Covernton, M.D.....Toronto.

J. J. Cassidy, M.D.....Toronto.

H. E. Vaux, M.D.....Brockville.

E. E. Kitchen, M.D.....St. George.

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FOURTEENTH ANNUAL REPORT

OF THE

PROVINCIAL BOARD OF HEALTH.

To the Honorable GEORGE AIREY KIRKPATRICK, K.C.M.G., *Lieutenant-Governor of the Province of Ontario.*

MAY IT PLEASE YOUR HONOR:

The Provincial Board of Health begs leave to present its fourteenth annual report, and takes pleasure in acquainting your Honor that upon the whole the sanitary state of Ontario has been satisfactory, the Board not having to report the prevalence, to an extended degree, of any epidemic. Those diseases commonly existing in most communities of men have appeared here and there; but the people having acquired sanitary knowledge and consequent wisdom, have, under the guidance of their local authorities, in most instances, succeeded in putting a stop to the progress of such infectious maladies as have appeared among them. Chief among those diseases has been typhoid fever—chief in prevalence but not in fatality.

It seems becoming that the Board should express to your Honor its satisfaction with the readiness of the local authorities throughout the country to employ their powers in stopping the advance of contagious disease whenever it appears in the midst of their communities, and of the success which in all instances have followed their efforts this year, and that the year has been on the whole one so favorably marked by the healthfulness of its character.

Among the subjects which have occupied the attention of the Board may be mentioned:

(1) The report of the committee on epidemics *re* Homes for consumptives; (2) a report of a committee of the Board on an outbreak of typhoid fever in Brantford; (3) a report of the committee of the Board on Water Supplies, *re* the water supply of Port Hope; (4) a report of the same committee on the investi-

gation of the Thames river as a source of water supply for the city of Chatham; (5) a report on the water supply for the town of Orangeville; (6) a report on the Galt sewerage system.

With respect to "Homes for Consumptives" it has to be said that, while this Board is favorable to them, some prominent physicians are not as yet prepared to fully endorse their necessity, on the ground that consumption being a malady of which the causation is now clearly understood and easily obviated, there is no good reason for removing the subjects of it from their own homes, where by easy management it is quite possible to destroy the agent of its infection, and thus preserve the other uninfected members of the family from the disease; this preservation being, according to them, the principal object in the removal of the consumptive from the private home. It need hardly be repeated however, that while the removal of the danger of infection to the healthy would be good reason for such Homes, there is, in the opinion of this Board and most sanitarians, the still greater reason that until consumptives be placed where their exercise, food and habits can be regulated, no great curative effects of climate are to be expected.

The enquiry into the outbreak of typhoid fever in Brantford resulted in the disclosure of its cause, and in its being shown that it is unsafe in that city to use any water from wells dug within its old limits, and that the public supply must be alone trusted for domestic use.

The yearly introduction of new public water supplies into the towns and villages of the Province is becoming noteworthy, and the duty of the Board to examine into the sources of supply has added much to its otherwise onerous duties. Especially is this true where, as in some instances it has occurred, the municipal authorities are inclined to challenge the wisdom of the Board's suggestions or the force of its arguments in preserving supplies from the danger of sewage pollution. There have been during 1895 several instances, however, where the Board's advice has already borne practical fruit, and where local public opinion has justified the action taken by this Board.

The purification of the water of the Thames river at Chatham, and still more, the more perfect plant of the same character for purifying the public supply of St. Thomas, are two very satisfactory examples of the successful results of artificial filtration; the water from the not very clear river, passed through the artificial filter beds being proved by analysis to be equal in purity to that of waters of the first class.

The water supply of Orangeville, obtained from springs rising from beneath gravel beds in the vicinity of the town, is of the highest purity and sufficient in quantity, and illustrates another of the several ways by which Nature's methods are utilized by the modern sanitary engineer.

The Galt sewerage system has been a difficult problem for some time, the dwellers farther down the Grand river objecting to its pollution by the outflow from the town of Galt; while the latter were not prepared, on the ground of expense, to treat its sewage chemically or otherwise before its flow into the stream. The town is now consenting, after an appeal to this Board, by those who thought themselves aggrieved, to so treat its sewage as that it will flow into the river harmlessly. These have been amongst the special objects of the attention of the Board during the year, there having been only one or two appeals to it from localities afflicted by diseases other than have been mentioned. In one of these localities diphtheria had been allowed to run its course unchecked for some time, but the people at last awaking to the danger and taking needful precaution the disease was stopped in its course, but not until it resulted in severe losses in a few families.

Upon the whole the Provincial Board of Health is happy in being able to congratulate your Honor on the comparative freedom from sickness, and the suffering connected with it, which has been enjoyed by Ontario during the year which has passed.

All which is respectfully submitted.

J. D. MACDONALD,
Chairman.

PART I.

PART I.

CHAPTER I.

REPORT OF THE SECRETARY.

To chronicle the fact that the public health of Ontario has stood high, relatively, to other years and other countries during 1895, is but saying what has come to appear a commonplace, so frequently for several years past has it been repeated in so far as the general prevalence of and death rate from diseases taken cognizance of by the Public Health Act are concerned.

The beginning of 1895 saw several outbreaks of smallpox, which proved, fortunately, to be of limited extent and duration, like the twenty outbreaks from imported cases during the second half of 1894. With the improved situation in the administration of public health in Detroit early in 1895, the Province has been saved from any further cases coming directly from that source; although the fact cannot be overlooked that the disease has maintained itself in that city for nearly two years, and that the report on the public health for Michigan ending with March, 1896, states this disease to be existing in seven localities in the State.

As will be found in the quarterly reports of the committee on epidemics for the year, the second semester indicated, so far as the reports received from local boards can be taken as an index, that diphtheria, which had been prevalent in the similar period of 1894, had notably decreased in its extent of area and localized prevalence.

Outbreaks of scarlatina, some of which became locally quite general, were reported, but in most instances the type proved to be mild. The same may be said of measles, which is but indifferently reported; but its general prevalence in certain localities has been more than for several years past.

The prevalence of fevers of the enteric type in several districts, and in those towns and villages where no safe public water supply exists, marked the several months succeeding the phenomenal drought, which prevailed over nearly the whole Province during the first two months of the summer of 1895.

In a special report on typhoid fever in Brantford, found in Part II., some of the principal facts associated with typhoid prevalence will be found. Whatever theoretical considerations may suggest with regard to the causation of typhoid in relation to the several principal sources of local filth, the fact of its dissemination being due directly to drinking water, or indirectly through milk, stands out prominently in every study which has been made in recent years, whether in America or in Europe. The difficulties with regard to the condemnation of any water, such as that of a typhoid well, through the discovery of specific germs of disease by bacteriological examination add an element of difficulty to the question; and health officers are often forced to act on the now well-determined lines governing sanitary inspections. Given the presence of recognized sources of possible pollution of any public water or of private domestic supply, and action for the prompt removal of the cause of pollution continues to prove

effective in abating outbreaks of the disease. Thus it can be confidently predicted in cases such as that where the epidemic in Brantford was traced directly to polluted wells, that to the degree that such are closed, and the unpolluted city water utilized, will there be a decrease of fever cases, under conditions such as those which prevailed last season. It would seem that in connection with the specific germ of enteric fever, the element of external environment has supplied factors as yet unexplained and which leave the question of specific causation to some extent an open one. Associated with the existing uncertainty in regard to the specific germ of typhoid is, however, a growing assurance as to the possibility and practicability of restrictive measures for preventing these pollutions of waters, invariably associated with the prevalence of enteric fevers. The Provincial Board of Health may very well be pleased with the situation it finds itself in to-day, as compared with even five years ago, in the powers given it for the control of public water supplies, and the enforcing of measures to maintain them in a state of purity. The previous unsatisfactory condition of the statute, giving the Provincial Board power to deal with defective water supplies, or to insure the institution of new supplies of known purity, has been removed by the amendment made by the Legislature to the Health Act by the Public Health Act of 1895.*

* **3.** Section 30 of the said Act (Cap. 205, R. S. O., 1887) is hereby repealed, and the following section and sub-sections substituted therefor:

30.—(1) Wherever the establishment of a public water supply is contemplated by the council of any city, town or village, it shall be the duty of the said municipal council to submit to the Provincial Board of Health, together with the plans, an analysis of the water from the proposed source or sources of supply, and an affidavit stating that the water analyzed is taken from the proposed source, and that the analysis submitted to the Board exactly represents the conditions of the sample examined. In case the source of any proposed public water supply does not in the opinion of the Provincial Board of Health, meet the sanitary requirements of the municipality, either by reason of the quality of the water, or because the water is likely, owing to the situation of the proposed source of supply, to become contaminated, it shall not be lawful to establish such waterworks without first obtaining from the Provincial Board of Health a certificate signed by the chairman and secretary, stating that the proposed source is the best practicable, having regard to all the circumstances of the case, and that all proper measures have been taken to maintain the supply in the highest possible and practicable state of purity.

(2) Whenever the construction of a common sewer or of a system of public sewerage is contemplated by the council of any city, town or village, it shall be the duty of the said council to place itself in communication with the Provincial Board of Health, and to submit to the Board, before their adoption, all plans in connection with said sewer or sewerage system. It shall be the duty of the Provincial Board of Health to enquire and report upon said sewer or system of sewerage, as to whether such is calculated to meet the sanitary requirements of the inhabitants of the said municipality, and as to whether such sewer or system of sewerage is likely to prove prejudicial to the health of the inhabitants of the said municipality or of any other municipality liable to be affected thereby.

(3) The Provincial Board of Health may make any suggestions or amendments concerning the plans submitted, or may impose any conditions with regard to the construction of such sewer or system of sewerage, or the disposal of sewerage therefrom, as it may deem necessary or advisable in the public interests; and the construction of any common sewer or system of sewerage shall not be proceeded with without being reported upon and approved of by said Provincial Board of Health, and no change in the construction thereof, or in the disposal of sewerage therefrom, liable to injuriously affect the public health shall be made without previous submission to and approval of said Board.

(4) The decision or report of the Provincial Board of Health with regard to any system of water supply or any common sewer or public system of sewerage, or the disposal of sewage therefrom, shall be subject to appeal to the Lieutenant-Governor in Council, such appeal to be made within one month after the filing of the report or decision in the office of the minister of the department to which the Provincial Board of Health is attached; and such decision or report, when not so appealed against, or when confirmed or amended and confirmed upon appeal by the Lieutenant-Governor in Council, shall be binding and conclusive upon all the municipalities and persons affected by the same; provided always that whenever it shall appear that any change of circumstances or conditions has arisen the Provincial Board of Health may, if it deem it advisable, make further enquiry and report as to any system of water supply or common sewer or system of sewerage, or the disposal of sewage, which report shall be subject to appeal as aforesaid, and have the same force and affect as aforesaid.

(5) The said Board may from time to time modify or alter the terms and conditions as to the disposal of sewage imposed by any award authorizing any system of sewerage or the extension of a sewer, and their report or decision shall be subject to appeal as aforesaid and have the same force and affect as aforesaid. But this shall not entitle the Board to modify or alter the terms and conditions of a certain award dated the 5th day of March, 1895, made by Judge Ketchum, in the matter of reference between the corporation of the town of Peterborough and the corporation of the township of North Monaghan, until after the expiration of the five years therein mentioned, but this provision as to the said award is only to apply in case the award is held by the courts to be in point of law a valid award.

Action under these new powers has already in several instances resulted most beneficially; and it is to be noted with satisfaction that towns are becoming not only most anxious to maintain their own supplies in a state of purity, but are also accepting the position that they must so deal with their own sewage as not to make it a source of danger to other communities. In fact the recognition of the rights of suburban municipalities is being forced upon our towns and cities by the growing knowledge and appreciation of possible dangers on the part of even rural communities. As yet, doubtless, the fear conjured up is oftentimes more imaginary than real; but if the fear of the rural dweller of pollution from external sources serves to make him apprehensive of the dangers near at home, we may well be pleased to know that the science of cleanliness is making headway on the farm as well as in urban municipalities.

The occurrences of the past year in connection with the pollution of international streams have still further brought into prominence the question of the disposal of town and city wastes, and have forced the necessity for conjoint action on the attention of your Board, which, through its secretary, presented the matter before the American Public Health Association at its Denver meeting last year. A special committee on the subject was appointed with your secretary as chairman, and it is hoped that the matter may soon be brought within the range of practical action.

As illustrative both of existing dangers and the certainty that they will become greater, there could not be a better example than that given in the report of the committee on epidemics, found in Part II. on the epidemic of typhoid in Windsor. The presence of the large city of Detroit on the American side of the Detroit river made it natural that the early settlements on this ancient highway to the Upper Lakes should develop from hamlets into towns; and so there are, on the Canadian side, within a distance of four miles three distinct and separate urban municipalities with separate governments and imaginary separate interests.

Walkerville, at the head of the river, has the accidental advantage of having no town above it, and so can have pure water and be oblivious to the dangers which may arise from its sewage poured into the river within a mile of the intake of the public water supply, common to the two lower towns of Windsor and Sandwich. In such instances there can be but one conclusion as to the demand for intelligent co-operation between the several municipalities, and of the wisdom which the Legislature has shown in providing means for compelling such action if the public interests demand it.

A similar situation exists on the American side of the Niagara river, where Buffalo holds the key to the situation on Lake Erie, and oblivious to others' needs, pours the sewage of 350,000 people, and the refuse from the immense fleet of vessels in its harbor directly into the stream, which flows within three hours to the intake pipes of the water supplies of at least four other municipalities. Indeed the phenomenal industrial development of the district from Lake Erie to the great water power at Niagara Falls is making of the whole district what may be considered an almost continuous city. Curiously enough, the health authorities of Buffalo have been examining with interest and some alarm the water of the Grand River, Canada, which flows into the lake but a short distance west of Buffalo, for evidences of sewage contamination. With a danger most remote, if existent at all, the fact illustrates how the scripture adage of "seeing the mote in a brother's eye" while allowing the beam to remain in one's own, is applicable to communities as well as to individuals.

The large amount of correspondence during the year from the frontier municipalities of Muskoka, Algoma, and Nipissing, especially with regard to outbreaks of diphtheria, continues to illustrate the many difficulties incident to sparse settlement and most limited medical assistance and financial municipal ability. The work done by the Provincial Board through the assistance of the police magistrates of the unorganized districts, while serving in many cases most useful purposes in limiting outbreaks, is necessarily very imperfect and unsatisfactory, operating at such a long distance from the seat of operations, and with officers in some instances one hundred miles apart. The fact that there are some 100 school sections in the unorganized districts illustrates the existence of numerous small settlements, while it indicates the presence of an organization already in existence, easily made use of by a slight amendment to the Public Health Act, which would be productive of most excellent practical results.

The amendment to section 99 of the Public Health Act, prohibiting the feeding of offal in a raw state to hogs, has proved one step in advance in the difficult task of bringing the numerous slaughterhouses in every district within the control of sanitary regulations. There is, as has been repeated before, no such common cause of local nuisance, and probably no more frequent cause for the spread of disease than the presence of such filthy establishments and the putrefaction of food materials which are prepared therein. The essential evil lies in the inability of local boards of health, as too often constructed in these village communities, to comprehend the effects of the evil or to suggest adequate local means for its remedy. Often influential residents, the slaughterers too often, have premises centrally situated with wretched buildings badly equipped for the purpose, and with poor water supply and no facilities for washing the floor or for the disposal of the waste except by throwing it on the ground.

The numerous reports from widely separated districts of contagious disease in animals intended for human food, and the positive fear which here and there has been created by irresponsible persons selling, locally, diseased animals is creating a state of affairs, not only demanding a remedy, but forcing the attention of the public to the only method whereby an adequate and permanent remedy can be applied. This must be found in the inspection by all incorporated municipalities of their public meat and milk supplies. This subject will be found treated of further in chapter IV. of this report.

The past year has witnessed gratifying progress in the propaganda, which the Board has for the last five years instituted in the education of the public and of the authorities in the national importance of the question of instituting systematic efforts to deal with tuberculosis, whether in man or animals; and to this end the establishment of "Homes for Consumptives" has been persistently recommended. Through the efforts which several philanthropic gentlemen have made, seconded by provincial medical practitioners, a site for a Consumptive Sanatorium has been selected near Gravenhurst in Muskoka, and a strong association organized to put it into practical operation. The town has granted a bonus to the scheme, conditionally upon its being conducted under regulations satisfactory to the Provincial Board of Health, and it is hoped that the Sanatorium, when once opened, will be conducted along such lines as will make it possible for your Board to extend its usefulness by bringing it into touch with the local boards and hospital boards in all the larger municipal centres of the Province.

This brief summary of the work of the year sufficiently indicates the scope of the problem and the extent of the tasks which your Board has had laid upon it.

It might have been natural to assume that the Board, during the fourteen years of its existence, would have been able to so grapple with the foregoing and

other similar problems that comparatively little more than the continuance of routine work would henceforth be necessary. But experience goes to show that a very large proportion of the work of past years has been but the muster of prospective warriors and the organization of battalions and their education in arms. The *casus belli* is now well-defined and clearly set forth. We see the righteousness of the cause, while the people's enemies are definitely recognized. Improved weapons are daily being forged; and the marshalling of men for the attack is being carried on under the most modern methods of scientific warfare against disease. One need and this of the greatest importance must yet be supplied. The army chest, if not lacking is still most inadequately supplied. The department of the commissariat has in many instances been quite forgotten or in most instances hardly been organized. In Ontario, and equally so in most parts of America, the army in the field is loyal and enthusiastic to a phenomenal degree; but it is being starved. How long the blood will continue to flow warm in the veins of soldiers who, to use the words of another, are expected "to grow fat on the east wind," is a problem which may readily be determined by the physiologist; but it would seem that the municipal legislator too often deems himself the only trained manipulator of the haematometer. Of the experience of this Province as to what it has gained of health, of happiness and of freedom from epidemic disease during the past fifteen years, even the most skeptical cannot fail to speak; while to those who care to examine the collated statistics, whether of diseases or of deaths, an economic lesson will be taught of the most important kind as regards the increase of wealth through the avoidance of personal sickness and the loss of the results of productive labor.

With, however, the increasing recognition of the public health department as a necessary part of state or municipal medicine, with the objects for which it is organized more clearly defined, with its officers specially selected and trained to the service, it may perhaps be legitimately expected that a corps of officers of health spread over the whole Province will gradually make their services and their influence so felt that the money grants for carrying on good work and for fair remuneration to the workers will be voted, if not with alacrity at any rate with a consciousness that ample return will be made for the outlay.

CHAPTER II.

THE ACTION OF LIGHT UPON BACTERIA.*

It is a curious fact that in the history of every department of science we have examples of observers overlooking some simple near at hand point, the discovery of which at a later date explains many apparent discrepancies, necessitates new interpretations and perhaps alters profoundly subsequent work.

One example of this we see in the action of light upon bacteria and other organisms, the tremendous significance of which has been but recently recognized. Although the hygienic importance of sunlight was early insisted on, as a result of the study of epidemic diseases, when the bacteria were discovered, the comparatively logical investigation, viz., the action of light upon these organisms was to a very large extent neglected.

This line of investigation was not, however entirely neglected, a few isolated observers followed it up to a certain extent, but whether it was that they did not present their results in the proper manner, or that their work was overlooked on account of more startling and more interesting discoveries, the fact remains that with the publication of papers upon the subject in 1892 by Buchner, of Munich, and Marshall Ward, of London, the matter came almost as a surprise to bacteriologists. The result is that now that we do recognize this light action, we must look with caution on a good deal of earlier work, especially upon the virulence or viability of many disease germs. One evidence of the changed views upon the subject is seen in the way in which pure cultures are preserved in laboratories now, as compared with a few years ago. At present if a culture is required to be preserved in as normal a state as possible it is placed in a dark ice chest; formerly they were left exposed to the bright light of a laboratory.

Looking back at the history of the subject we find that the first paper upon the effects of light upon bacteria was one published in 1877 by Downes and Blunt in the proceedings of the Royal Society. They showed that diffused daylight had a retarding influence upon the putrefaction of organic infusions and that direct sunlight, absolutely inhibited putrefaction. These observers of course worked before the days of pure cultures, with mixtures of many species of bacteria in animal and vegetable infusions, and it was natural that their results should not have been so sharply defined as those of later workers with newer methods. Their work, however, formed the starting point of all the later researches. Isolated investigations were made in ensuing years, some of them of very great merit, but as I remarked above they did not seem to carry weight, and not until 1892 was the attention of bacteriologists generally turned to the subject.

This was due to the publication almost simultaneously, by Buchner, of Munich, and Marshall Ward, of London, of a series of researches, in which practically the same methods were adopted. The latter's attention was called to the subject by noticing that in plate cultures of bacteria, with which he was working, some of the colonies seemed to develop weakly and the suspicion pointed to the action of light in retarding the growth. To test this he infected plates of jelly with anthrax bacilli and their spores, and exposed them to direct sunlight or to diffuse light under screens of black paper in which were cut stencilled letters or

*Being substance of a paper read before the Canadian Institute by J. J. Mackenzie, B.A., of the Provincial Board of Health.

figures. In this way the light only fell on the infected jelly underneath the stencils. After exposure for a varying period, the plate was placed in a temperature favorable for growth, and at the end of forty-eight hours the jelly was seen to be cloudy with multitudes of colonies everywhere except where the light had acted, there the jelly was sterile. The plate when fully grown resembled in fact a photographic positive which had been exposed under a negative. Indeed one ingenious person in some experiments of this kind substituted a photographic negative for the stencilled paper with the result of a positive of the picture in bacterial colonies, the shadow being clearly jelly, the high lights cloudy with closely grown colonies.

Buchner's observations and methods were practically the same as the above with the exception that instead of *Bacillus anthracis*, he used the typhoid bacillus, and one or two other forms.

These experiments were, of course, open to the objection that although the sunlight undoubtedly stopped growth, it did not actually kill the cells. This objection was at once answered by cutting out small fragments of the isolated jelly and mixing it with fresh jelly and beef broth, the result being not the slightest evidence of growth, showing that the cells were actually killed.

These simple experiments have been amply confirmed by subsequent observers and the additional fact has been noted that bacteria are not all equally sensitive to light.

As the result of a number of experiments made by different observers in Europe, one may conclude that in plate cultures an hour and a half's exposure to direct sunlight will kill most bacteria, that five hour's exposure to diffuse light will have the same effect and that twelve hour's exposure to an electric light of 900 candle power will have an equal result. In the action of sunlight, the state of the atmosphere plays a very important part, the slightest haziness retarding the action materially. This is shown very markedly by a comparison of Marshall Ward's results with those obtained in Germany, the smoky atmosphere of London rendering a longer exposure necessary in order to destroy the germs. The time of the year is also important, but Dieudonne of Berlin found, curiously enough, that strong March sunlight was as germicidal as that of July or August.

Long before the actual death of the cells, however, the light has begun to have an effect upon their metabolism. If cultures were taken of such a form as *Bacillus prodigiosus*, a germ which causes a liquefaction of gelatine, and produces a blood red color; half an hour's exposure of such a plate to direct sunlight, produces colonies with a distinct loss of power to liquify the jelly and with a total loss of color production.

The isolated bacteria had to be cultivated in fresh jelly for some little time before they regained their normal character. This shows very distinctly that the light is injurious not only to the bacteria actually exposed, but that the injurious effect is transmitted to their descendants for a number of generations. The possibility of this is no doubt due to the asexual character of the reproduction in these organisms, as naturally a bacterial cell would have to divide (*i.e.*, reproduce) many times before it finally got rid of the injurious metabolic products of light action.

Not only in culture media in the laboratory, has light been found to have a germicidal action, but also in water the same effect has been noticed. Buchner found that a sample of water containing 1,000,000 germs of *B. coli* per c.c. was sterile after one hour's exposure to direct sunlight. He further found that the solar action penetrated for some depth into clear water, for instance, exposure to

sunlight of one of the plate cultures described above for four and a half hours, at a depth of about eight feet, caused the death of the bacteria. Beyond that depth, however, the action became rapidly weaker.

Even in the air when the bacteria or their spores are quite dry, the sunlight has a very considerable germicidal action; this fact has been beautifully shown by some experiments of Marshall Ward's made in order to determine whether the change was in the bacterial cell or in the culture medium. Anthrax spores were allowed to dry upon the bottom of a plate glass plate and then were exposed under stencilled black paper, as in the other experiments, after exposure for a long time they were covered with a thin plate of sterile agar jelly, with the result that the spores that had been insolated did not grow, whilst those which had been protected from the light infected the jelly and grew; while the reverse experiments in which the spores were preserved in the dark, whilst the jelly plate was exposed, showed that the sunlight had no appreciable effect upon the jelly, the bacteria growing well in all parts of it. This experiment proves very conclusively the change, whatever it may be, takes place in the bacterial cell, not in the medium in which the bacteria are living.

In all these cases, however, it was found that a necessary condition of light action upon bacteria, was the presence of oxygen.

Anthrax spores in water are rapidly killed, but if the air over the water is exhausted, or replaced by hydrogen, they are not killed. This has been confirmed by many different observers: a *sine qua non* for the germicidal action of light seems to be the presence of oxygen.

All these researches, of course, were at once open to the objection that the destructive action was due, not to the light but to the heat, and these objections have been answered by different men in different ways, such as by the use of the control plates with thermometers or by the absorption of heat rays by alum solution, etc., etc., but always with the same result, the heat had nothing to do with it.

After settling this point, the question naturally arose, what particular rays of light were germicidal and what were not?

This question was answered by many observers by using color screens to interpose between the light and the bacteria. It was shown that screens which absorbed the blue, violet and ultra-violet rays of the spectrum had the same effect as black paper, no germicidal influence passed through. On the other hand, screens which transmitted these rays did not retard the death of the cells; under such screens, especially if quartz was substituted for glass, death took place as rapidly as in direct sunlight.

Perhaps the most beautiful demonstration of this fact is given by Marshall Ward in one of his communications to the Royal Society. A plate infected with anthrax spores was exposed to the spectrum of the sun or of a powerful arc light. Broadly speaking, the effect of the light became visible first at the green end of the blue and increased in amount until, in the blue violet and violet, it reached its maximum intensity, but it extended quite far out beyond the limits of the visible spectrum, showing the action of the ultra-violet rays.

From all these researches it will be seen that the sunlight is, perhaps, one of the most important hygienic agencies in the destruction of bacterial life. In the self-purification of streams, perhaps we find it assisting most materially. A series of investigation made under Buchner, would tend to show that there is even a diurnal variation in the bacterial contents of rivers and lakes, the daylight gradually killing off the bacteria, so that they become less numerous as the

day passes, but as soon as night sets in they begin again to increase, reaching a maximum a short time before day breaks. The following are some observations upon the River Isar:

6.15	P.M	160 per c.c.
8.45	"	5 "
11	"	8 "
12	"	107 "
1.45	A.M	380 "
3.00	"	460 "
4.00	"	520 "
5.00	"	510 "
6.15	"	250 "

This is, however, only an isolated example, and the subject would require much more extensive working over before one could accept as startling a variation in numbers as between 520 and 5 as due to sunlight alone. It must be admitted, however, that bright sunlight on a summer day must mean an enormous destruction of bacterial life in a lake or river.

The action of sunlight, doubtless, also explains why surface waters constantly have more bacteria in them in winter than in summer, although the conditions of temperature are so much less favorable to bacterial growth.

Aside from the actual destruction, we see in cultures from streams in the summer, qualitative differences as compared with cultures from the same streams in winter, and this qualitative difference is undoubtedly due in part to the action of light injuring the germs to such an extent that they do not grow characteristically in the gelatine plates.

Another very important condition must play a part in the destruction of bacterial light by sunlight. This is the power of independent motion which many have, and their need for oxygen. The oxygen diffuses downwards into the water with comparative slowness, and motile bacteria which are aerobic (*i. e.* require oxygen for growth), will move upwards to the region of most favorable oxygen tension in the water. This necessarily exposes a greater number to the action of the light than would occur if they were evenly distributed, or if they tended to drop to the bottom as the non-motile forms do. It must not be forgotten, however, that there is a very great difference between the intensity of action of direct sunlight and diffuse light, and consequently the comparative clearness of the water plays a very important part in determining the life of germs suspended in it. While light will have an actual germicidal effect upon bacteria three or four feet down in clear water, in muddy water its effect is comparatively superficial.

But in the air about us, the germicidal effects of sunlight are seen and undoubtedly play a part in the limiting of infectious diseases which recently would hardly be believed possible. The bacillus of tuberculosis when exposed to sunlight in the dry state is killed as quickly as any other forms, and even before it is killed its power to harm, *i. e.*, its virulence is very materially decreased: the same is true for the bacteria of diphtheria, cholera, typhoid and all the other pathogenic bacteria. In regard to tuberculosis, I have no doubt that the action of light in destroying and weakening the germs, has perhaps as much to do in explaining why more of us do not contract the disease as any other factor. For when we think of the number of cases in such a city as Toronto, in which absolutely no care is taken about the disinfection of the sputum, and remember that a large

percentage of this sputum, laden with millions of the germs of the disease, finds lodgement upon our pavements to be converted into dust, we can easily realize the chances of infection if there was not present some such natural agency as sunlight to weaken or destroy the germ. It must be remembered here again, however, that in air, the light has not a free scope to carry on its destructive work, that every germ which is covered with an envelope of dirt, is protected by a light screen, that in a layer of mud or filth, such as lodges on our cedar block pavements, the light acts in a purely superficial manner, and that dark and narrow alleys such as are found in the cities of the old world protect myriads of bacteria from destruction by light.

It is a curious biological point that one can recognize a plate culture from air, at once, by the characters of the bacteria which are found in it. What might be called a typical air plate will show the presence of germs which grow very slowly and have a very slight power of liquefying the gelatine, but especially it will show the presence of a large number of forms which are so-called chromogenic forms, mostly yellow, orange and pink, all colors which naturally protect the protoplasm of the cell from the effects of the actinic rays.

Accepting then the action of sunlight upon bacterial life, the question arises how does it act; is it due to the formation of some substance in the medium in which the germ lives, which is germicidal, or is it due to an action within the germ itself?

A number of experiments tend at first sight to show that the first view is the correct one, these are as follows:—Some observers have found that some media are distinctly less favorable for the nutrition of bacteria after being exposed to sunlight than before. This is certainly true, but death from insolation may occur in media in which it has been impossible to show such a change, whilst direct experiment shows that air dried spores are destroyed by sunlight. Marshall Ward's observations on anthrax spores are especially interesting here: as I explained above, exposure of the dried spores under the stencilled paper showed distruction in the lighted area, whilst insolation of the medium with protection of the spores showed no destruction. But numerous observers have shown that sunlight acting upon moist substances of all kinds, gives rise to peroxide of hydrogen. This has been shown for practically all the culture media used in the experiments. Peroxide of hydrogen is an active germicide, and if a sufficient quantity were present, would explain sufficiently the germicidal action of the light. This, unfortunately, would not explain the action in the case of the dried spores, unless we accept the formation of this substance in the interior of the spores. At the same time, it is not found in culture media in sufficiently large quantities to account for the exceedingly rapid death due to direct sunlight, such, for instance, as the destruction of the typhoid bacillus in an hour and a half. It has been shown that a solution of peroxide of hydrogen of a strength of 1 to 20,000 only prevents the development of bacilli but does not kill them, and in order to kill many of the bacteria of the mouth, Miller found that a ten per cent. solution was necessary, acting for from ten to fifteen minutes.

It seems to me more probable that although the formation of peroxide of hydrogen must have an injurious effect, it is really only one of the accompanying phenomena of the germicidal light action. There are, apparently, no other substances formed in culture media by insolation which will explain the germicidal action, so that we are compelled to look to the action of light upon the cells themselves.

The destruction of dried spores by direct sunlight is very good evidence that the injurious substances are in the cells, but there are other reasons. The fact which I referred to above, is perhaps one of the best, viz., if the light is of a low intensity, or acts only for a short time in forms such as *Bacillus prodigiosus*, its effect is seen long after the germs are removed from the action of the medium in which insolation occurred. The cell is constitutionally affected so that for many generations its decendants cannot produce the necessary ferments which enable them to liquify the gelatine nor produce the color which is so characteristic of the germ.

Marshall Ward has brought this out very clearly in a recent communication of his to the Royal Society in some biological studies upon *Bacillus ramosus*, a common water germ, a culture of which is shown in this plate. These researches have a very great biological interest apart from the subject of light action. In fact the whole paper is one of the most valuable which has been contributed upon the biology of bacteria.

Throughout the researches which were exceedingly long and tedious, the observations were made upon the growing cells under the high powers of the microscope, not in mass culture such as are our ordinary methods of investigation. The organism was followed from the germination of the spore, throughout its life, until spores were formed again and the effects of various conditions, favorable or unfavorable, noted by observing the rapidity of germination ; and the rapidity or abundance with which spores were formed when nourishment was exhausted. The results of observations upon single individuals was of course to show the effects of slight unfavorable conditions which would be missed when the organism was studied in mass cultures.

Ward's conclusions were that the spore was even more sensitive to the light than the growing bacillus. That the growing bacillus seemed to possess something which enabled it to withstand the injurious light action for a certain length of time. It seemed also that the growing bacillus could more readily recover from the light action than the spore, as the spore when exposed for the same time to light, germinated slowly, produced slow-growing cells, and finally gave rise to a smaller crop of spores when growth ceased.

This showed that the injury was a constitutional one of great importance but that the growing bacillus started from a non-lighted spore, in some way, overcame the injurious effect. In fact, some observation showed that direct sunlight allowed to play upon the growing filament had at first a stimulating effect. At first, as a result of insolation, growth rose to an abnormal rate and then ceased altogether. Marshall Ward's theory then, is that the injurious effect of light is due to an action upon some substance in the cells of the organism, which is destroyed by a process of oxidation, and the greater sensitiveness of the spores is due to the large amount of food material stored up of a highly unstable character, ready for use as soon as germination begins. This, I think, is the right view, although we will have to work out many points before we can explain it all clearly. The necessity of the presence of oxygen, points to its being due to an oxidation change and the observations upon the growing filaments which were first stimulated to excessive growth, and then killed, are especially interesting as bringing the whole question into line with what we know, with regard to higher plants, viz., that whenever we find rapid growth or tissue change going on, such as the opening of the flower, growth of the leaf, etc., we find that there is at the same time an increased absorption of oxygen, and excretion of carbon dioxide, and in many instances a distinct rise in temperature of the growing organ ; all in fact pointing to increased oxidation, *i. e.*, increased destructive metabolism.

If we apply this to the bacteria, we see distructive metabolism in the spore means a storing up in it of poisonous metabolic products, which if not too numerous, simply clog it as it were, whilst if more numerous actually cause the death of the protoplasm. On the other hand in the growing filament, by the very fact that it is growing, it is enabled to get rid of these metabolic products or in some cases when the light is intense, the intense destructive metabolism reacts upon the cell in the production of an abnormally rapid growth, but the cell, however, rapidly becoming exhausted dies.

Extending the biological significance of light to other plants, Ward points out a fact which will occur to all of you who have any botanical knowledge as broadly correct, viz., that wherever we find a unicellular structure, which contains stored food material, and at the same time is apt to be exposed to light, we find that it is protected by a light screen.

For instance grains are almost always yellow or brown in color, the oily contents being thus protected by the colored coat from the actinic rays of the sun. Amongst agarics, those forms with colorless spores occur mostly in woods, whilst those like *Coprinus*, which have black spores grow right out in the open. Many of the moulds have olive green or black spores and so on. In fact it is possible that one of the important functions of chlorophyll, is to act as a light filter for the unstable compounds present in the plant cell since we have long known that it absorbs the whole violet end of the spectrum.

We see then from the facts which we have placed before you, that as far as concerns bacterial life, we have in the sun a very potent factor in its destruction, and it is not far to the conclusion that if we wish to rid ourselves of these forms of bacteria, which we have to fear, viz., the disease producing ones, one of the best methods is to allow all the sunlight possible to enter our homes and our streets. These conclusions most of us have reached before we knew anything about the action of light upon bacteria, but it is always well to have good scientific grounds for our belief. At the same time it is well to remember that there are even under the most favorable conditions, obstacles to the penetration of light everywhere, and that it should in the case of actually infected surroundings, be depended upon only as an accessory means of disinfection, and that there are other ways of destroying bacteria which are entirely under our control and consequently certain.

CHAPTER III.

A REVIEW OF THE ELEMENTS ENTERING INTO SOME CANADIAN CLIMATES IN RELATION TO TUBERCULOSIS.*

Having taken advantage of the opportunity afforded by my attendance at the meeting of the American Public Health Association, held in Denver in October last, I extended my trip westward to San Francisco, and thence returned by way of Victoria and the Canadian Pacific Railway. Having already visited most of the so-called health resort districts of the continent, I was anxious to compare the high-level districts of our western mountains with these, and to collect such data as might seem likely to prove of value in arriving at some comparative estimate of our Canadian climates, with similar districts farther south, in relation to their influence on tuberculosis.

The subject of climate is too extensive to be exhaustively treated even in a series of reports, and where so much has been written one is naturally loath to express positive opinions with regard to the climate of localities he has visited; so I shall, therefore, limit my remarks to the consideration of some Canadian climates, referring to others only incidentally and for purposes of illustration.

Excluding the moist sea-board districts of Canada, we may conveniently divide our climate into that of three more or less distinct districts.

1st. That of Ontario and Quebec.

2nd. That of the great prairies extending in foothills sixty miles beyond Calgary to the very base of the Rocky mountains.

3rd. The Rocky mountain district of high-level climate, including under this term, that of the mountain ranges extending westward to the Cascades or Coast Range.

These again may be divided and sub-divided, for the purpose of study, in order to obtain as many as possible of the details which would characterize any particular climate which we might consider as having positively favorable influence upon the treatment of consumption.

1. *Ontario and Quebec climates.* These are all to be considered as low level climates, the greatest heights being those of the Central Plateau of Ontario; and next to these, the wooded districts of Muskoka and Algoma. Always excluding from our consideration the immediate shores of the great lakes, and notably those of the lower levels, as of lake Ontario, we find that the Central Plateau of Ontario varies from the Muskoka region in two particulars: (*a*) The denuded character of the surface, it practically having had its forests cleared away, and being thus more or less completely exposed to the winds blowing from the several great lakes bounding the western peninsula; and (*b*) In the surface characteristics of its soil, which overlies limestone rocks, and is generally of a clay loam and gravelly loam in character. In Muskoka, on the other hand, we have a district still very generally wooded, and having as its surface geology, a series of rocky ridges with intervening valleys, formed by the foldings of the gneissoid Laurentian rocks. The whole country, where not denuded by clearings and by forest fires, is covered with a dense forest of mixed woods, everywhere characterized by much evergreen growth, notably hemlock, balsam and spruce. The rock comes everywhere near the surface, much indeed being bare on the

* Being a report presented to the Provincial Board of Health, by P. H. Bryce, M.D., Secretary.

hillsides, while the valleys of the streams are generally overlaid with black deposits of humus. Everywhere in the valleys are lakes, rivers and creeks. Of necessity, the climate must naturally be considered one with much humidity, its average rainfall, sunshine, etc., being set forth in the accompanying diagrams. That it has hitherto proved a salubrious climate for the settlers there is shown both by twenty years of vital statistics and by the generally high reputation it has obtained as a summer health resort. That settlers almost wholly engaged in outdoor pursuits have always been notably free from consumption, the vice of city dwellers, is well known; and hence it does not follow of necessity that the Muskoka climate is, *per se*, specially suited to consumptives. It has, however, I believe, certain positive qualities which must place it in a high position in its class of low-level climates.

These are: its natural drainage, which is most admirable; its shallow and porous soil, drying quickly; it rocky surfaces, rapidly warming and tempering, along with the warm waters of its innumerable lakes, the cold air of evening; which latter desideratum is still further obtained by its extensive forests, constantly moderating the effects of radiation by the warmth of the air which surrounds them, since the sap slowly cools and the ground beneath them radiates its heat but slowly; while also the violence of the general movements of winds blowing over them from the cold surfaces of our great lakes of the north is effectually lessened by these forest areas.

These climates have comparatively low winter temperatures, winter beginning commonly in November, and continuing with frozen lakes and deep winter snow, thereby creating a dry winter atmosphere, largely free from much that makes, notably the southwestern portion of Ontario and the whole central states, so damp in the winter. The salubrious influence of dry winter cold, where protection from the winds is afforded, is well known.

2. *The climate of the prairies and foothills.* Passing westward from the forest region of Keewaydin, we soon recognize the positive character of the nine hundred miles of largely treeless prairies, extending to the base of the Rockies, with a level of from 400 to 5,000 feet above the sea. From examination of the weather chart we see that the whole region lies rather to the north of the track of the easterly movement of the great storm centres, which are constantly forming in the northern Pacific. Like all the prairie country of the west, the climate has, however, two distinguishing characteristics, viz., much sunshine with great heating of the earth's surface during the day, followed by extremely rapid radiation of the earth's heat at night, brought about by the absence of trees and lakes and of their accompanying humidity; and by the high winds, the necessary sequence of the unbroken surface of the country. As the Rockies are approached and the elevation increases, these characters present their extremes. During the day, intense insolation from the increasing height and increasing dryness is present; while during the warmer seasons we have as especially characteristic the daily high winds, caused by the cold air currents rushing down from the summits of the snow-capped mountains to take the place of the ascending currents of air, warmed over the rapidly heating surface of the dry plains. Intensity, extremes of climatic phenomena, in a word, variability, diurnal rather than seasonal, is the chief characteristic stamped upon the climate of this immense tract lying between the forty-ninth parallel and the wooded belt to the northward.

3. *The Rocky mountain, or high level climates.* As we approach the mountains we again come into a climate moist enough to supply a forest growth well up to the top of the mountains of the highest ranges. The mountain tops are clothed, notably in the Selkirks, with eternal snows, while their streams

for the most part finding their outlets, southerly towards the western sea, flow through canyons and mountain passes, giving local character by their presence to the climate of the different valleys, always changing as they are in their levels and exposures to sun and wind. In these valleys are many spots sheltered against the prevailing winds, which closely follow the course of the deep canyons or river valleys. This immense sea of mountains, extending to the very coast line in British Columbia, has, then, an almost infinite number of "local climates," as may be readily understood when we find that between Vancouver on the sea and Kamloops up the valley of the Fraser, we can find two climates, one with an annual rainfall of thirty-five inches, and another only two-thirds the distance between Toronto and Montreal distant, with an annual rainfall of only eleven inches, and this at a height not more than 1,000 feet above sea level. Many equally great differences can doubtless be found at distances many miles nearer the coast.

We have thus inside the mountain wall of the Cascades, or coast range, a remarkable phenomenon, viz., narrow river valleys, and rising from them in benches, like terraces, hill after hill, absolutely dry and treeless, brown, except for a brief period in the spring, and without vegetation other than the bunch-grass, characteristic of the arid foothills to the east of the Rockies. Within less than an hour's ride by horseback, one may rise from 500 to 4,000 feet, and within a few moments go from the irrigated bottom lands, with their three and four crops of grass, to bare hills, which seemingly are wholly without vegetation.

It is needless to say that in such a region we have climatic conditions so totally different from anything seen in Ontario, that we must fail to adequately conceive the character of such a climate, or what would be its probable effect upon the progress of consumption. What is quite clear, however, is that within 200 miles of a sea climate, where it may rain during almost all the winter months, with but little positively cold weather, being influenced by the warm westerly winds caused by the Kuro-Sivo current, we have a climate at the altitude of Guelph which has almost perennial sunshine; where there is but ten inches of rainfall annually, where the soil, speaking generally, is dry to barrenness, where roses may bloom in November, and where the elevation being low, the mountains of the coast range, while robbing the air of its moisture, are yet not so high as to be covered for long periods with snow, as where the height is great, and the cold winds blow from the higher mountain peaks to the eastward.

I have in a broad manner set forth the distinctive characteristics of our three great inland areas of climate, and their several differences are at once seen. There are, however, included under these broad characters many minor ones, which are continually taken into account in the consideration of climates. Thus we have, not only wind, but the direction of the prevalent winds, as well as their average velocity. In temperatures we have not only annual maxima and minima and their mean, but the monthly mean and the daily mean or range. We have, further, the average cloudiness and the number of days of sunshine and of rain; and we have the monthly and annual relative humidity, or the percentage of moisture commonly present in the air.

It therefore becomes manifest that with the variations of the seasons from year to year, the climate, even for the same locality, is at the best based upon a system of averages and a delicate balancing of the several factors in order to arrive at definite conclusions as to what is best suited for certain physiological and pathological conditions. Thus we have cold as opposed to heat; humidity

as opposed to dryness; cloud as opposed to sunshine; high as opposed to low levels; variability as opposed to equability; plain as opposed to forest areas, and the many important elements of soil, drainage, etc.

After a careful survey of the several elements I am inclined to place the factors of climate in relation to the treatment of tuberculosis in the following order of importance:

1st. Dryness of soil and air.

2nd. Equability—including daily and also seasonal range.

3rd. Temperateness—or absence of extremes of daily or seasonal heat or cold.

These, it will be found, include or cover most, if not all the other factors, such as hours of sunshine, character of soil, annual rainfall, daily range, mean daily and annual temperatures, direction and velocity of the wind, extreme heat and extreme cold, and treeless or forest areas.

So far then as we are immediately concerned with these factors, we may shortly compare these three main types of Canadian climate by reference to such meteorological data as are available. In the tables and diagrams appended are given the data for the several areas, Toronto being taken for comparison. Those that are complete and comparable are the mean monthly temperatures, the mean daily range, the monthly rainfall in inches and the number of rainy days. It is unfortunate that the mean relative humidity is not available for the western districts, in order that the relation existing between the number of rainy days and the total rainfall might have been seen.

Although a few degrees of either greater or less cold or heat do not appear to be material in themselves, yet in relation to humidity and daily range they become of much importance.

Thus we see that Kamloops has a slightly higher temperature than any of the four stations.

Mean annual temperature:

Toronto	45°.' F	Lat. 43°-45″
Gravenhurst	41.8	" 45°
Calgary	36.9	" 51°
Kamloops	46.3	" 50°-45″ although

nearly in latitude 51° north, while Toronto is 43°-45″.

The mean daily range, while in my opinion a very important factor in estimating the value of the climate, is not a factor to be estimated apart from the temperature and humidity. Thus the high daily range of Calgary throughout the year must be considered in connection with its 3,500 feet above sea-level, and with its intense sunshine during the day and its great dryness, there being but eleven inches of rain and ninety wet days in a year. Such dryness prevents saturation of the atmosphere and promotes diathermancy, thereby making rapid radiation of heat and fall of temperature a necessary sequence. Opposed to such conditions in every particular, we see Toronto with a daily range from thirty-three to fifty per cent. lower at 350 feet above sea-level, and a humidity so much more as to have annually 200 days of rain and a precipitation of thirty-four inches, which serves both to reduce temperature and lessen daily range through the saturation of the air at night-fall and the formation of dew. It is interesting at this point to note the position of Gravenhurst between these two extremes. With a daily range midway between the two, except in February, when it becomes excessive, it shows an annual mean temperature only 3.3° lower than Toronto; and while having, owing to its heavy snowfall, rather more of an annual rainfall, has less

than seventy-five per cent. of the number of rainy days seen in Toronto, with no more than 500 feet of greater elevation. We see in the latter comparison the marked influence of the great body of cold lake water on which Toronto is situated in promoting humidity, which, while lower in March than at Gravenhurst, increases to one-third more in April, and maintains this position until July, when the great lakes having become warm the autumnal precipitation in both districts moves along together. Associated with the chilling influence of our Great Lakes we find that, though nearly one and a half degrees farther south, the temperature of Toronto is but slightly higher from April to August than that of Gravenhurst, where the protective influence of the great forest areas and the rapid heating of rock surfaces cause the day temperature to rise rapidly, although not to such a degree as to cause an extreme daily range. We thus have in the region represented by Gravenhurst an approach in some degree to the standard we have proposed.

In the general description of the climate of the great inland areas, already given, I have pointed out the unusual combination of topographical features, which gives us in the district represented by Kamloops, in a latitude almost the same as that of Calgary, and at a height above sea-level but 700 feet higher than Toronto, a climate with dryness as great as that of Calgary, (there being but eleven inches of annual rainfall and but seventy-five days of rain, or but slightly more than one-third of the rainy days in Toronto), and with an annual mean temperature nearly one degree higher than that of Toronto and ten degrees higher than the annual mean of Calgary. The existence of such a climate in a latitude of 700 miles farther north than Denver (40° N.), having an annual rainfall one-third less and an annual mean temperature but three degrees lower than Denver, at an elevation not exceeding 1,000 feet, is so remarkable and interesting a fact as to demand our earnest attention. From the comparison already given we have seen in Toronto and Calgary illustrations of two types of climate the one without great extremes, and the other that of the dry, high-level climate, with whatever excellencies or defects attach to each. At Kamloops we have a climate partaking of some of the qualities of both, and yet being quite distinct from either. With an altitude, the same as many points within twenty miles of Toronto, it has a rainfall equal only to that of Calgary, of El Paso in Texas, or the city of Mexico. With a temperature but slightly colder in January and rising in March to that of Colorado Springs, its August mean temperature is just the same as Toronto, and is followed by an autumn extending to December with a distinctly higher mean temperature. This mean, as might naturally be expected, is obtained without the great daily range seen at high levels.

Comparison of Mean Daily Range.

—	August.	September.	October.	November.	December.
Colorado Springs, 6,050 feet	30.0°	28.0°	24.5°	28.2°	.....
Calgary, 3,500 feet.....	28.9	30.4	27.1	23.7	21.6
Kamloops, 1,100 feet.....	29 2	27.9	17.9	11.9	11.9

It would thus appear that at the moment when the temperature, declining with the advancing year, makes the element of daily range an important factor in climate we find the daily range in Kamloops dropping to seventeen degrees, and eleven degrees in the cold months, and this with a monthly rainfall not averaging half an inch during the last four months of the year. Similarly we find in March and onward, with a moderate daily range and great dryness, the temperature rising to a monthly mean some ten degrees above that of

Toronto. We need not here discuss the causes of these remarkable qualities; but it must be abundantly evident that they supply those conditions in a very large degree, which the advocates of equable moist climates without great variability demand on the one hand, and which those of dryness, diathermancy, variability and stimulation demand on the other. The climate of the basin east of the coast range does therefore supply in a notable degree the elements which, as already stated, seem to me the most important in the climatic treatment of consumption, viz., *dryness*, with brightness of insolation and those positive haematogenic effects now universally accredited to sunlight; and *equability* as illustrated by the several examples already given, due especially to the accident of its low elevation and to the warm winds robbed of their moisture, which blow over the coast range and which doubtless lessen what in so dry an atmosphere would ordinarily result in great radiation at night fall, with an increased daily range.

That the climate is in the true sense a *temperate* one, that it is in a remarkable degree free from extremes of heat and cold, has been sufficiently illustrated by comparison with Colorado; but the comparison is most readily understood when we state that the mean annual temperature is two degrees higher than the southern highlands of New York and Pennsylvania, five degrees higher than that of the Northern Adirondacks, where are some of the most noted sanatoria, two degrees colder than Newport, (R. I.), and only thirteen degrees colder than Los Angeles, whose monthly mean in January is not lower than fifty-two degrees. The latter climate, though having but little rain, had in 1894 forty-five cloudy days, 167 partly hidden, and has frequent fogs owing to the influence of the northerly cold currents along the coast. The highest temperature in 1894 was ninety-nine degrees.

From this comparative study it has been made apparent that we have within the limits of Canadian territory climates comparable in every way with those of the United States, excepting of course those southerly latitudes which, moderate in winter, are nevertheless wholly unsuitable as health resorts except during the winter season. We have too, as has been fully illustrated, three distinctly different types of climates, each of which has some qualities, which experience elsewhere has proved to be suitable to some particular person or persons and apparently unsuited to others.

It seems, therefore, that in the progress of the movement, which this Board has for years so persistently advocated, for the establishment of homes or sanatoria for the proper supervision and treatment of consumptives there can be no good reason to doubt, but that, if any such institutions be properly conducted, their location, whether in Muskoka, or Calgary, or Kamloops, will have as happy results from the standpoint of cures as any sanatoria situated in similar climates in other countries. How great have been their success, we have to-day extended statistics to prove. It is to be hoped that in every Province such action will be encouraged by such private benevolence and Governmental assistance as will lead to the establishment of sanatoria at several centres in Canada; so that we may from year to year be able to establish from comparative statistics the real value of the more important elements which go to make up the several types of climate.

NOTE.—As seen in the following diagrams the *average mean annual* temperatures are as follows: Toronto, 45.1° F.; Gravenhurst, 41.8° F.; Calgary, 36.9° F.; and Kamloops, 46.3° F. The *mean daily ranges* of temperature are, Toronto, 15.9° F.; Gravenhurst, 21.3° F.; Calgary, 26.1° F.; and Kamloops, 22.8° F. The annual rainfalls in inches are, Toronto, 34.04 inches; Gravenhurst, 36.77 inches; Calgary, 11.54 inches; and Kamloops, 11.05 inches.

The total days of rain during the year are, Toronto, 200 days; Gravenhurst, 143 days; Calgary, 90 days; and Kamloops, 75 days.

Diagrams showing, Fig. I., Mean Annual Temperature: Fig. II., Mean Daily Range of Temperature; Fig. III., Annual Rainfall by Months in Inches, and Fig. IV., Annual number of Rainy Days by Months at the four Weather Stations of Toronto, Gravenhurst, Calgary and Kamloops, Canada.

Fig. I. Mean Annual Temperature.

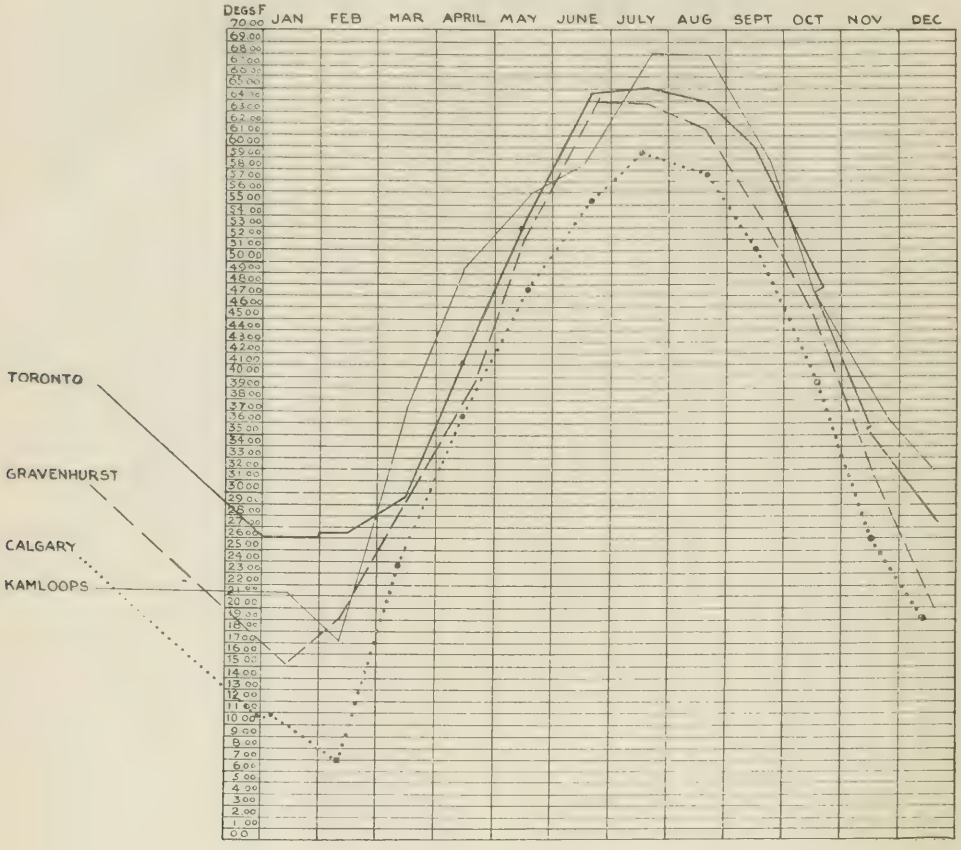


Fig. II. Mean Daily Range of Temperature.

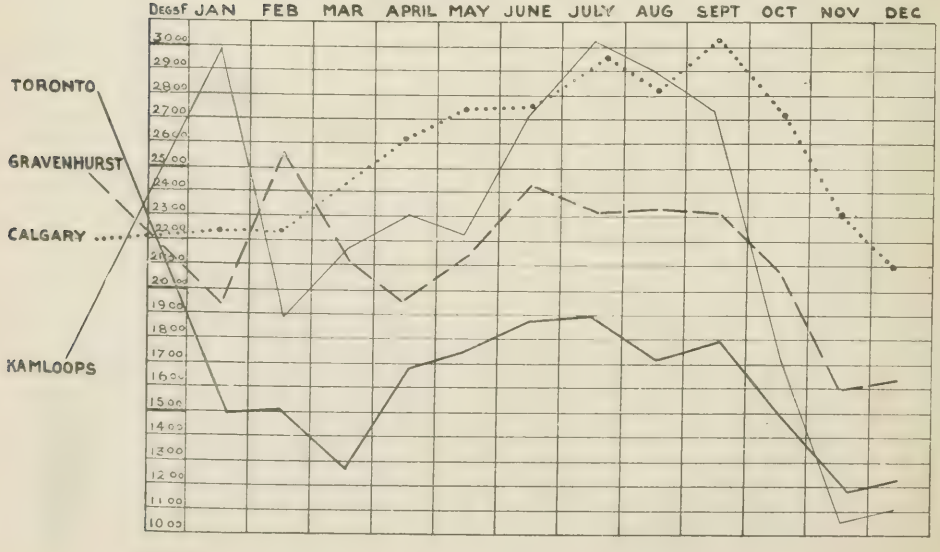


Fig. III. Annual Rainfall in Inches.

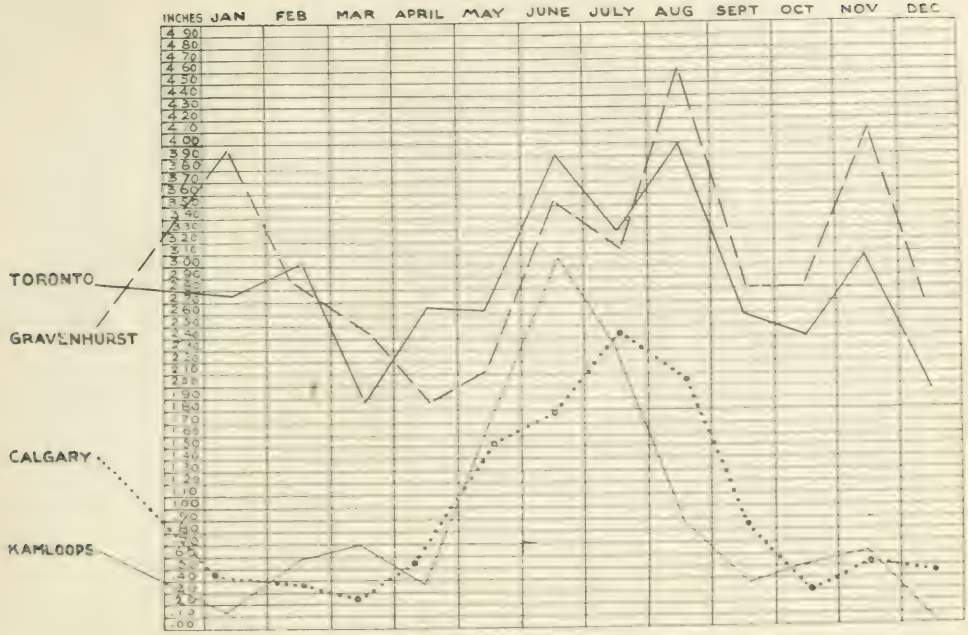
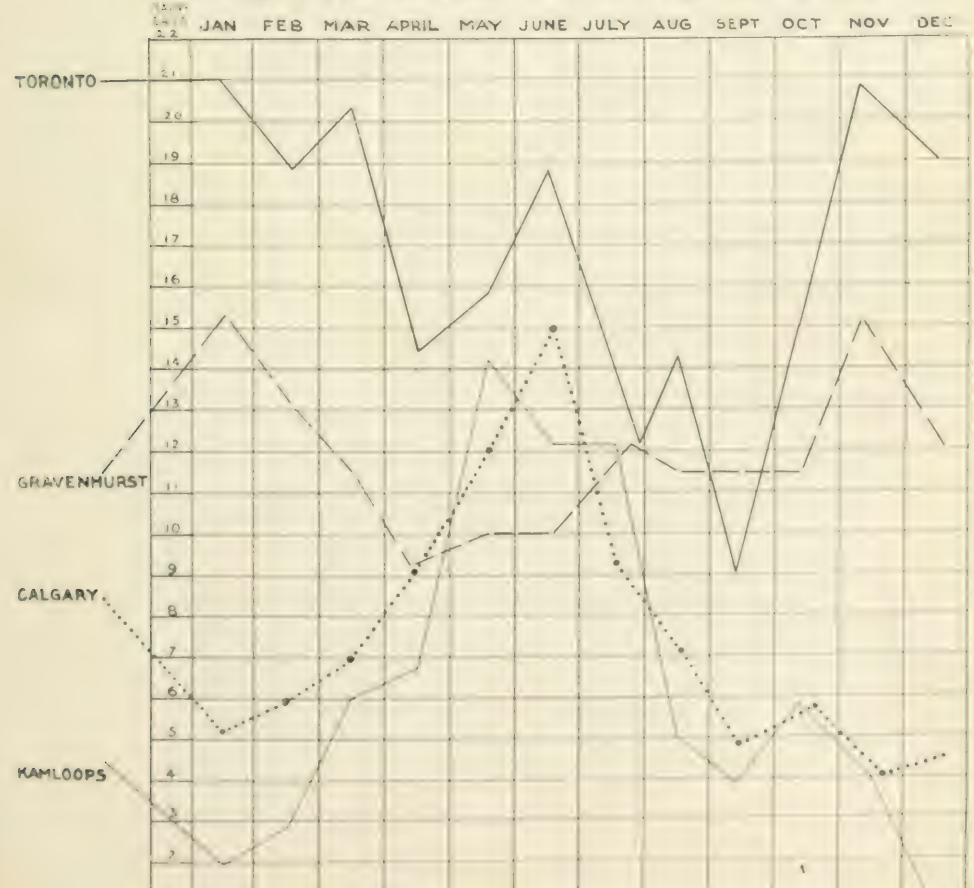


Fig. IV. Annual number of Rainy Days by Months



CHAPTER IV.

CONTAGIOUS DISEASES IN CATTLE AND CATTLE INSPECTION.

In the evolution of public health work in America, as on the continent of Europe, legislation naturally took cognizance of those diseases, which, appearing as pestilences, not only resulted in the destruction of thousands of human lives, but also created most serious losses to trade and commerce, paralysing often the whole business of such cities and districts as might become subject to their ravages. Associated with such legislation, were investigations into the causes of these diseases, and in the classical reports of the Local Government Board of England we find fully detailed, the results of such enquiries regarding the prevalence of cholera and typhus, the types of epidemic diseases. Following closely upon the work which resulted in the development of public water supplies and sewerage systems for cities, and in the opening up of wider streets and the erection of model dwellings in the place of the pestiferous closes and old buildings, began enquiries by the public health authorities into the causes of diseases, such as rinderpest, and foot and mouth disease in England, and of anthrax or charbon in the herds of France. Indeed, it was in the latter field, both as regards isolation and preventive experimentation, that the most striking results of modern scientific investigation have been obtained. Following the lines of investigation begun by Chauveau and Davaine, the immortal Pasteur with that insight, which has made his work the type of all inductive science, pushed his inquiries into fields of research, as yet untrodden, and gave to the world those methods, which have only needed the rays from his lighted torch to enable his followers to peer into the hidden recesses of Nature, and thereby reveal to a sceptical world, the wonders of her *mysteria*.

Illustrating this by the one example of anthrax, we have a disease which for over two centuries has appeared as an epidemic both in men and animals in Europe; which in A.D. 1617, is said to have caused 60,000 deaths in men in the one city of Naples, and which so late as 1864, destroyed in one province of Russia, 64,000 animals and 525 men; and yet which within a few years thereafter, through Pasteur's studies, has almost disappeared from France, where it had been for years the cause of the loss of millions of francs annually.

As in the case where the epidemics of cholera, typhus and of smallpox, were soon followed by the investigation of diseases characterized as endemics, such as typhoid and diphtheria, rather than as *maladies fulminantes*, we find Dr. John Simon, in the Public Health Report, England, of 1862, stating, "Allegations have during the last few years been abundantly made, and have with the progress of time, become more and more definite, that the flesh of animals slaughtered while in a state of disease, and likewise the milk of diseased animals, are extensively sold for human consumption in the United Kingdom. And the substance of these allegations has been submitted to the Lords of the Council. In 1862, their Lordships ordered an enquiry to be made in this matter, and under their directions I requested Mr. John Gamgee, Principal and Professor in the Edinburgh New Veterinary College, to report on it. For your Lordship's purpose it was likewise desirable, that enquiry should be made as to the circumstances under which the more important diseases of stock prevail in the United Kingdom, and particularly into the influence of importation and of home-trade in spreading the infection of such diseases."

In this enquiry Mr. Gamgee was instructed to visit infected centres in the United Kingdom, and also those parts of the continent whence came most of the imports.

Dr. Simon states that the substance of Mr. Gamgee's report then published, was "that disease prevails very extensively in the United Kingdom among horned cattle, sheep and swine; that the diseased state of an animal not only does not commonly lead the owner to withhold it from being slaughtered for consumption as human food but on the contrary in large classes of cases (especially where the disease is of an acute kind) leads him to take immediate measures with a view to this application of the diseased animal; and that consequently a very large proportion (Mr. Gamgee believes as much as a fifth part) of the common meat of the country—beef, veal, mutton, lamb and pork—comes from animals which are considerably diseased."

Mr. Gamgee classified the diseases as, (1) contagious fevers; (2) anthracic diseases; (3) parasitic diseases. In the first were pleuro-pneumonia and foot and mouth disease, and in the second, anthrax and black-quarter, and in the third, measles and trichina in the pig, and liver-fluke in the sheep.

Mr. Gamgee is further quoted as stating "that the flesh of all such diseased animals is being very largely sold for consumption as food; that carcases, too obviously ill-conditioned for exposure in the butcher's shop, are abundantly sent to the sausage makers, or sometimes pickled and dried," . . . "and that the principal alternative, on a large scale, to the above described human consumption of diseased carcases is, that, in connection with such slaughtering establishments, swine (destined themselves to become presently human food) are habitually fed on the offal and scavenage of the shambles, and devour often raw, and with other abominable filth, such diseased organs as are below the sausage maker's standard of usefulness."

As to the effects of the use of such diseased meats as foods, some remarkable instances of fatal results are given by Dr. Simon, and a notable one quoted by Mr. Gamgee, where the meat taken from a sick animal treated with tartar emetic, caused sickness in 321 persons who ate it, and death in one case.

Dr. Simon, further with his remarkable insight, speaks of "the question of meats being rendered unwholesome by decomposition, and the question of meats being rendered unwholesome by disease." "Among the cases which I see adduced as illustrations of mischief from diseased meat, are some which, for aught that appears, may only illustrate the well known fact that even in presumably healthy meat, poisonous properties, different from those of common putridity, are sometimes developed by decomposition."

Mr. Gamgee is finally quoted as stating "that a very large proportion of the disease which now habitually prevails amongst live stock in the United Kingdom, and which he estimates as proving fatal to stock to the immense pecuniary amount of more than six millions sterling, might by proper measures be prevented."

These extended extracts have been given as being of special interest in illustrating what seems to be the first attempt at an accurate scientific investigation in England of the diseases of cattle, and, whether viewed from the sanitary or economic standpoint, they present a picture than which nothing would seem more horrible or gloomy.

Amongst the most remarkable epidemics amongst cattle in England, was that of the Russian cattle plague or rinderpest, or *typhus boum contagiosus*, which

was introduced into England by Russian cattle in 1864, and within a year, the total number of cattle on farms in Britain, where the disease had appeared, was 159,710, while the total attacked was 73,549 of which 41,491 died.

The activity of the Cattle Commission stamped out this disease, only after frightful losses, by segregation and by destroying all animals which had been exposed. It reappeared to some extent in 1872; but with the more chronic diseases of pleuro-pneumonia, endemic in most European countries at this time, it was not until 1888 that the pleuro-pneumonia Slaughter Order of the Privy Council was passed, requiring all cattle being, or having been in the same field or other place, or otherwise in contact with the diseased to be slaughterad within ten days from the exposure.

It is very remarkable that in the Public Health Reports of Dr. Simon, of the Local Government Board, nothing is said concerning the two diseases of cattle, which to-day, whether in England or in America, are attracting in the greatest degree the interest of both public health authorities and veterinarians, viz., tuberculosis and actinomycosis. As amongst the diseases of mankind, it seems probable that they have been practically disregarded, in the presence of the diseases which like rinderpest in cattle or cholera in man, appear in epidemic explosions.

Hence to-day, as all health authorities have only begun to seriously have their attention drawn to prophylaxis, and to measures for restricting the spread of contagion in human tuberculosis, so have they only begun to realize that bovine tuberculosis and actinomycosis, from their very chronicity possess dangers more wide-spread and permanent than many of the more acute diseases.

The history of veterinary medicine in the United States is of much more recent date. We have almost nothing printed concerning animal diseases, until after the civil war. Massachusetts has a history of existing pleuro-pneumonia in 1859-65, but much apathy and indifference resulted regarding it, and owing to ignorance the merest spasmodic attempts were made to deal with it. In 1863, however, a commission of the Legislature was appointed with powers to deal with it, but was largely inoperative, as even some of its members doubted the infectious character of the disease; but the disease continuing to spread, the slaughtering order was enforced in 1866, and 1,164 cattle were killed by the commission, and others by the municipal authorities. The disease in this outbreak had been introduced in cattle from Holland. In common with other States, the disease re-appeared in 1882 in cattle imported from England, and its reported presence in several States resulted in the slaughtering order of the Department of Agriculture of Great Britain, at the port of entry, which has continued ever since.

In 1879, a cattle commission was appointed to deal with the disease in New York State; while in New Jersey in 1881, cattle diseases were placed under the charge of the State Board of Health. Then, as in Europe, this type of progressive contagious disease, had been shown to spread only with the movement of cattle in transit, and hence until the importation of thoroughbred cattle from Europe for breeding purposes began with the rapid settlement of the western prairies, and the movement eastward of cattle to the eastern markets, little was heard of cattle diseases in the United States.

The same may be said regarding diseases of swine. The export trade in American bacon had become well established, when in 1879, the continental countries, which used largely hog products, became frightened at the reported presence of *trichina spiralis* in American bacon, and Italy first, and then afterward

Hungary, Germany and France had, by 1881, prohibited the importation of American bacon. While the excitement spread to England, yet no order of exclusion was passed.

The west had already become a producer and exporter of hog products. In 1865, the Union stock yards of Chicago were first established, and by 1883, it was estimated that there were 11,179,000 cattle in the States and Territories west of the Mississippi, with an almost incalculable number of hogs. The exclusion of these hog products from the European market in 1879-1880, and the Slaughter Order in 1882 for cattle entering the ports of Great Britain, proved almost fatal to the export trade of the United States in animal products; but it illustrates how utterly inadequate any attempt at State inspection and control of the health of animals had proved.

Such then was the situation up to 1881, when the Federal Government began its work. It established in that year quarantines at Baltimore, New York, Boston, Portland and New Orleans; and while an order was made at the same time for a ninety day quarantine against Canadian neat cattle, it was rescinded shortly afterwards, since the Canadian quarantine for such cattle from Europe was found to be similarly ninety days. In the same year the United States Federal Government appointed a committee to study the several phases of the pork industry; but up to 1884 had not succeeded in having any of the restrictive measures *re* foreign importations rescinded. It is somewhat curious, as it would seem to have its parallel in some recent Canadian reports of cattle inspection, that Commissioner Scanlan, of the Washington Bureau of Statistics, in 1884, reported that after most careful investigation, he could find no trichina and no hog-cholera in American hogs, and that packing establishments used only the most healthy animals for packing.

This state of affairs became intolerable, and the first step towards permanent work, was taken when Secretary Folger, of the Department of Agriculture, Washington, established the Bureau of Industries by an Act of Congress, dated May 29th, 1884, and issued an order August 10th, 1884, requiring all persons having Jersey cattle in the United States, not to ship cattle in the meantime under a penalty of $100 to $5,000 for violation of the order. Since that period the progress of the work of the Bureau and the extension of the co-operation of its officers with State authorities has become most noteworthy. The principle adopted early was freedom of State action; but when State authority was lax, the Bureau would carry on investigations and issue slaughtering orders in cases of contagious disease and give the compensation provided for under the State laws. Realizing that the meat industry ranks third in importance in the export trade of the United States, it was most natural that when fully realized the work of protecting and fostering it should be encouraged in every way possible. In view of the exclusion and its rigid maintenance on the continent of Europe against the hog-products of the United States, the exports of which had realized in 1881, $104,660,000 to all countries, Congress passed an Act providing in Regulations, dated March, 3rd, 1891, for a microscopic examination of the tissues of hogs at the time of slaughter, in order that certificates that the same were free from *trichina spiralis* might be issued; and also for an inspection of all hogs slaughtered for export or for interstate trade.

This order supplemented one made on October 30th, 1890, for the systematic inspection and marking of all cattle and sheep intended for export.

Turning to a review of the diseases of cattle in Canada it will be found that the Report of the Department of Agriculture established at the time of Confederation, practically makes no mention of agricultural matters, while deal-

ing extensively with matters of immigration and quarantine. Reference is made, in the report of 1871, to an investigation ordered by the Lieutenant-Governor of Ontario, and carried out by Andrew Smith, V.S., of Toronto, and Dr. Nicoll, into the reported presence of an "epizooty" amongst stock in that Province. The result of the enquiry states that the disease existing was of a mild character, and was nothing more than that caused by a species of fly prevalent that summer. The "epizooty" existed in Illinois and it was supposed that the disease had been imported. The report of 1869 refers to an Act passed by the Parliament of Canada for restricting contagious diseases in cattle, while the report of 1887 makes mention of the fears of the introduction of an epizootic which had been then prevalent in Britain and the Continent, causing annual losses of millions of pounds. This refers to pleuro-pneumonia already made mention of.

The cattle quarantine seems to have been established about 1875, since the report of 1876 refers to the fears regarding the importation of the epizootic then existing in England and on the Continent. The report of 1884 makes mention of the outbreaks of cases of foot and mouth disease on two vessels importing cattle for breeding and refers to the limiting of the disease to the animals of the two vessels, although 800 cattle were in the Quebec quarantine at one time, and fifty persons were engaged amongst them. It is further mentioned in the report of 1884 that the importation of "neat" cattle into Canada was greatly lessened that year, owing to the fear of pleuro-pneumonia then existing in England. The report of 1883 states that the export cattle trade has ceased to be an experiment, while that of 1884, by Mr. McEachren, V.S., Chief Inspector, makes special mention of the good trade to be seen in *stockers*, *i.e.* cattle to finish for market on the English pastures. The report of 1884, and several other years, refers to a localized epidemic of scab in sheep in the Laprairie district near Montreal, and to the Pictou cattle disease, which in 1893 was fully reported upon by Prof. Adami, of McGill University. Reference appears in the 1883 report to a ship with "Texas Fever" from Canada, being seized in the Mersey, but is afterwards released on protest of Sir Charles Tupper.

We thus see from these reports, that no reference had been made to either of the diseases, tuberculosis or actinomycosis, illustrating, as do the histories of cattle diseases, both in Britain and in the United States, the fact that only the more rapidly spreading epidemic diseases had been investigated or dealt with. To the credit of Canada, it may, however, be asserted that the quarantine for imported cattle was on a systematic footing before the United States took action, and that the latter country took up the work of cattle inspection by federal legislation only after the export cattle trade made the work a necessity in the interests of commerce. Owing to the relatively higher status of Canadian stock through the importation of thoroughbred animals for breeding purposes, to their inspection on entry, and to the cattle being better cared for, together with a healthier climate, we see that Canadian stock, isolated on small farms, and not running free in large herds as on the western plains, have hitherto enjoyed a reputation for healthiness, which has allowed the expansion of our cattle trade to go on, unimpeded by vexatious restrictions at the ports of those countries receiving most largely our exports. In the report of 1883, the absolute immunity from disease of Canadian cattle is remarked upon as one of the main factors in the prosperity of the trade.

As already seen in the progress of veterinary science in Britain and on the Continent, it was natural that as in medicine, attention should begin to be directed within the last ten years to those endemic diseases, of a more chronic character,

characterized chiefly by mal-nutrition and wasting, and which with the progress of biological science came to be suspected, after the discovery of the bacillus of tuberculosis by Koch, and its capacity for transmission by inoculation to animals, as being probably of zymotic origin and therefore communicable. Glanders in horses had been long suspected as being communicable, and indeed, a special Act had been passed by the Ontario Legislature in 1884, enabling local authorities and magistrates, to deal with it, and requiring all veterinarians to notify a magistrate of any cases discovered by them. The Animals' Contagious Disease Act of Canada, passed in 1885, named the following diseases as being contagious or infectious, and being those for which compensation was to be given, while actinomycosis has been added to the list during the session of 1896. The expression 'infectious or contagious diseases' includes, in addition to other diseases generally so distinguished, *glanders, farcy, mange, pleuro-pneumonia, foot and mouth disease, anthrax, rinderpest, tuberculosis, splenic fever, scab, hog cholera, hydrophobia, variola ovina and actinomycosis.*

From the summarized history which has just been presented, it becomes manifest that in Canada, as indeed, in all countries, the study of veterinary medicine has relatively a very brief history, and must in practice, be considered as having taken its position as a science, only within the last thirty years. Its development has had much to aid it, especially from the standpoint of commerce; for with the development of rapid steam transit, as has been seen, came the possibility of the development of the live cattle trade between America and Europe. Owing to the enormous number of cattle exported from North America, and the developing trade even from South America, and the numerous ramifications of the interstate and inter-provincial railway transportation, the last fifteen years have seen the evolution of a totally new state of affairs, which has demanded the attention not only of cattle-owners, shippers, and transportation companies, but also both of Federal and State Governments on both sides of the Atlantic. Along with the importations from all parts of the American continent into Britain, the dangers of the spread of communicable disease from one state to another, with interstate commerce, have similarly greatly increased, as well as the possibility of diseased animals carrying the contagion to the ports of entry in Europe. Not only this, but the facts which soon came to be learned that a most profitable trade could be developed in the exportation to Britain of well grown, half fattened beasts, called "stockers," to be prepared for the market on the rich pastures of some British county, added an additional element of danger of the introduction of disease into Great Britain. This was soon realized, when after the severe outbreak of Texas Cattle disease on the south-western plains, and the presence of pleuro-pneumonia in some of the Eastern and Central States, the Order-in-Council, of the Department of Agriculture of Great Britain, of 1882-3 was passed requiring the slaughter of all United States cattle at the port of entry in Great Britain and which has been continued ever since. This became of great incidental advantage to the Canadian cattle shippers, who were not slow to make the most of it, and while being at all times loud in condemning the introduction into Canada of American cattle, have, on the other hand, been equally strong in the praise of our Canadian herds seemingly so free of disease.

As a consequence of this condition of affairs, two very remarkable phenomena resulted; *first*, there came a stasis in the healthy activity which had begun to characterize the work of cattle inspection in Canada at the time when the Contagious Diseases Animals' Act was passed by the Federal Government of Britain in 1879, and a tendency to rest, if not on our laurels, at any rate on the fortunate accident of the healthfulness of Canadian herds; and *second*, there has resulted a full realization by the Government of the United States of the perils which their

export—and even internal—cattle trade might soon be subjected to if comprehensive, scientific and thorough measures were not promptly adopted for meeting the situation.

We have already seen how the Bureau of Animal Industries of the Federal Government of the United States, a mere tentative department ten years or more ago (being established first by Congress in 1884), has extended its operations until we see it in 1895 establishing under new legislation, even an interstate cattle inspection, superadded to that of the previous legislation of 1887 for the inspection of cattle for export; which, added to the laws establishing cattle commissions in some fifteen states, has caused a development of the work of investigation and stamping out of cattle diseases, the importance of which upon the relative standing of Canadian cattle in the European market does not seem to have yet been realized by the Canadian legislator or stock-breeder. (See U. S. laws referred to in Report on Inspection of Meat and Milk, Part II.)

To illustrate the operation of these laws, I cannot do better than present a summary of what anyone may see in daily operation at the Buffalo cattle market. Buffalo by its situation is most favorably placed for the building up of a large cattle market, and boasts to-day of being the largest sheep market in the world, over 6,000,000 sheep being handled at their local market in 1895. To-day there are forty-four acres covered with cattle yards and pens; and a new company has recently begun new yards with an area of sixty acres. In addition to the local city market of a population of 350,000, there is one long established and very large packing establishment, and several smaller ones engaged especially in the local and interstate trade. As will be seen by the Act already referred to, the railway companies can only transport to outside any state such animals as have obtained local bills of health. Brought to the Buffalo market they are at once drafted to different pens, those for local slaughter being inspected by city inspectors, and those for export or interstate trade being examined by Federal inspectors, who likewise examine all intended for slaughter in the one packing establishment having Federal inspection through asking for registration and by consenting to submit to the regulations of the Department. It is confessed by the city officials that the local staff is insufficient for an efficient inspection, but they cover the ground as far as possible. As will be seen in the following figures, it seems absurd that two or three city inspectors can have inspected 5,049,473 cattle, hogs, sheep and calves in 1895; but such is stated in the mayor's annual address.

This is all the local inspection that is done except to look up local nuisances at the numerous butcher shops of the city and suburbs, where a large part of the local supply is slaughtered. The city health authorities are anxiously asking for one or more abattoirs for extending the local inspections.

Returning, however, to the Federal inspection service, we find a staff inspecting every animal, either in the pens or on being weighed. Those showing disease or injury are placed into quarantine after being tagged and numbered and a short description of the animal taken. Those for slaughter in the registered packing-house are driven off as required to the yards of the packing-house, and there again carefully inspected as they are sorted into grades of different quality. Further inspection not having revealed any disease, the cattle pass on to the slaughtering floor. While being skinned and dressed each animal is carefully inspected by the veterinarian, the lungs, glands and intestines being examined especially for the detection of tuberculosis. When found healthy the meat is tagged "Inspected" with a numbered tag of the Bureau of Animal Industries, and the meat passes into the cooling chamber either for local use, interstate trade or for export.

All interstate packages have to be made up of meat bearing on each parcel the blue stamp of inspection by the Bureau Inspectors. If a carcase while dressed is found diseased in its lungs, etc, to any serious degree it is ticketed "Condemned," its number taken, and it is followed by the inspector to the "Rendering tank," where it remains until he sees it destroyed for food. Pigs and sheep are inspected similarly to cattle, both at the pens, stock-yards and in the yards of the packing-house. After killing, the internal organs of hogs are placed on a table in front of the inspector, who examines for swine-plague and hog-cholera, measles, etc. If diseased the condemned tag is attached and the carcase afterwards goes to the rendering tanks. In addition, however, to this inspection several small pieces are nipped off by scissors from different muscles, numbered the same as number of tag on carcase and taken to a room where are young women specially trained to examine with the microscope for trichina. The specimens from each animal are examined by two separate examiners, one in forenoon and one in the afternoon, and if the trichina is found the whole carcase is condemned without reserve. All packages for export, as before, receive the brand of the Bureau of Animal Industries.

Returning to the inspection of cattle intended for the wholesale trade or export, they are inspected individually, and if found healthy to outward appearance they have a metal tag punched into the ear with a number of a continuous series, and a detailed statement of the numbers in any given lot is daily made and forwarded to the Central Bureau at Washington; also a note of any animals condemned, stating cause. These animals tagged as inspected are admitted to interstate trade, but if for export are again inspected before going on board ship.

So complete is the system of registration that as an inspector in the Deptford market, London, stated to a Canadian friend, "The Americans are quite surpassing you Canadians, for we can trace any animal found diseased by that tag back to the very farm it may have come from in the Western States. We are getting afraid of your Canadian cattle." The quarantined animals at the yards are further examined, and if proved diseased on killing are all *tanked*, as the expression is. This work is being extended to the investigation and stamping out of tuberculosis and actinomycosis by inspection of herds. The latter must necessarily be largely carried out by State authorities, and as seen in the report contained in Part II. of this report, the work is in many states being vigorously prosecuted, compensation being given in every case.

We very naturally enquire what stage similar control and inspection has reached in Canada? We have already quoted references to show that Canada was early alive to the interests of this most important industry. We notice, too, that since the threatened scheduling of Canadian cattle in England, owing to reported cases of pleuro-pneumonia in exported stockers in 1892, 1893, much concern has been shown to prove that our Canadian cattle are free from this, and indeed all other diseases. The scheduling order was finally made in 1896, so that the favored position of Canadian live cattle exports extending for over ten years over United States exports has disappeared. Assuming what seems to be true that no cases of contagious pleuro-pneumonia have in England been proved against Canadian cattle, are there, therefore, no good and sufficient reasons existing in England for the issue of such an order? To answer this we have to examine the exports annually issued by the Dominion Department of Agriculture, and judge of our situation when placed alongside of the measures adopted in the United States to raise the standard of their cattle, even though scheduling continues.

The chief veterinary inspector, in his last report, states that out of a total of 99,606 cattle landed from Canada at British ports in the year ending November 1st, 1895, not a single case of pleuro-pneumonia could be discovered.

"Not only is this the case, but your inspectors have been very seldom called upon to investigate any diseases in the country—that in fact with the exception of tuberculosis and actinomycosis, and a few cases of scab in sheep, no diseases of a contagious nature exist in the herds or flocks of Canada. The healthiness of the stock generally in this country is almost phenomenal." Again—"The number of herds infected by this disease (tuberculosis) during the past year has greatly decreased in Quebec and the Maritime Provinces, due, no doubt, to the owners of cattle being now generally well informed of the incurable and dangerous nature of the disease, and the ways in which the infection is spread, more care in adopting preventive measures being exercised by them."

The percentages of tuberculosis in lungs examined at Quebec, Halifax and St. John, were respectively 2, 1½ and 2 per cent. Dr. A. Smith, of Toronto, chief inspector for Ontario, in speaking of the 927 pairs of lungs examined at Toronto, Hamilton, London and Galt, makes no mention of tuberculosis.

It must be presumed that the chief inspectors at the port of embarkation have carefully examined all animals exported. Of the 99,606 cattle shipped, fifty-seven lame, fifteen old and poor, one with mange and sixty-seven with lump-jaw, are stated to have been detained, and not one was found to be tuberculous. There would seem to be included in the staff for the whole Dominion fifteen veterinary inspectors and seven who report as customs officers at small ports of entry. These would not appear, from the few cattle reported, to be continually engaged in inspecting cattle at ports of entry, and several of the number are guardians of cattle yards principally where American cattle pass through the Lake Erie peninsula in transit. From this staff performing such work as comes to hand, we have to look to obtain the exact information which goes into the annual reports. In direct contradistinction to this, it is learned that the staff of the chief inspector at Buffalo for carrying out the regular work of daily inspection of the Bureau of Animal Industries is twenty-three, including veterinarians and others. *With an animal population of over 5,000,000 cattle, over 3,000,000 sheep and over 1,000,000 hogs in the Dominion, it is apparent that broad statements made on the strength of what such a staff of observers only occasionally and incidentally—not entirely—engaged may discover of tuberculosis, for instance, must, if published, only serve to cast doubt upon the accuracy of other statements with regard to pleuro-pneumonia or any other suspected disease.*

The following notes *re* complaints made to this Board during the past year illustrate how unsatisfactory the situation is with regard to the local inspection of animals and how conditions prevail that cannot fail, if allowed to continue, to result disastrously to the reputation of our live stock trade.

Feb. 18th, 1896.

JUDGE DARTNELL, Whitby:

Enquiry as to amendments to law in a case *re* an animal undoubtedly suffering from actinomycosis, animal was sold by farmer to Port Perry tailor, who refused payment on advice of veterinary, that animal was deceased. The judge has learned that cases of the disease are frequent. Judgment in the case was given for plaintiff, $26 and costs.

October 23rd, 1895.

H. H. DEWART, Toronto:

Enquiry *re* costs in prosecuting knackers for throwing out carcases of dead horses to be eaten raw by pigs in York township.

February 24th, 1896.

Dr. A. CAMERON, Owen Sound:

Statement *re* herd of twenty-nine cattle, healthy up to a year ago, when a two-year old animal having a lump on right jaw was introduced among them. At date of this letter thirteen out of twenty-nine had become affected. It is firmly believed many neighboring farmers have killed animals they could not sell, and have sold the carcases. There are many diseased animals in this neighborhood.

January 2nd, 1895.

J. Bowler, V.S., Chairman Government Board Inspector of Stock, Windsor:

Reports a cow dead from tuberculosis at a milch farm near Windsor, and no doubt it can be traced to other farms.

This is being kept private awaiting your action in the matter.

June 10th, 1895.

R. King, Barrie:

Asks if there is law to prevent feeding dead animals to pigs.

February 1st, 1895.

Dr. Gaviller, Grand Valley:

We have a large percentage of cattle in this part suffering from actinomycosis.

Some have been undoubtedly slaughtered by local butchers and sold as food. One head with two tumours was found recently in a pig-stye at rear of slaughterhouse.

December 26th, 1895.

J. Savage, Newmarket:

I learn a man on the third concession had a cow fattening which had several cancers, and that he milked and sold her milk to the cheese factory when she was in a bad condition.

February 26th. 1896.

Frank Dodge, Secretary Local Board of Health, Ameliasburg Tp., Prince Edward county:

Reports that within three miles of Picton, lives a man who has already fed the carcases of 150 old worn-out horses to pigs. There is also a man who goes through the county endeavoring to buy horses, and sells the hides for $1.50 and sells carcases to these men to feed to pigs.

September 3rd, 1895.

R. A. Sinclair, Secretary Local Board of Health, Cannington:

Re a nuisance in the matter of a large slaughterhouse in village, and demanding that action be taken in matter by this Board.

May 15th, 1895.

Alex. Waldie, Brighton:

The Local Board of Health has not stopped slaughtering complained of. He has been killing all day. He has twenty or more hogs and no floor. He cleans them out once in six months. If it is not stopped no one can live for bad smell and flies. The pen is not thirty feet from the street.

October 5th, 1895.

G. W. Webster, Secretary Local Board of Health, Ottawa, East:

Writes *re* nuisance caused by slaughterhouse along the street. Promises to abate nuisance. All the family near by was very ill. The stench is insufferable; original complaint made by J. C. Bauld, and local board has taken action.

September 13th, 1895.

Abraham Neelands, Invermay:

Slaughtering within corporation used for curing hides, drying skins and rendering fat. This goes alongside the warm meat left over night. Swine kept in small enclosure in immediate contact with slaughterhouse and are fed raw offal.

November 9th, 1895.

Dr. Harbottle, Burford:

States old horses are reported being shipped to Toronto extensively for fertilizer, probably for sausages.

February 8th, 1895.

D. R. Beaton, Pickering:

Re feeding dead horses raw to hogs.

February 9th, 1895.

Secretary St. Catharines Waterworks:

Re a farmer feeding dead horse to hogs; owner "said it was easiest way of disposing of it and did not hurt the horse."

March 4th, 1896.

Alfred Skippen, Medical Health Officer, Luther township:

States in that neighborhood "Vets." state there are some hundred cattle affected with tumors of the jaw, actinomycosis, and that they cut them out, sew up the wound, when the cattle are shipped to Toronto. He asks for an investigation.

January 18th, 1895.

D. Campbell, Uxbridge:

Complains of a hog-feeding establishment within the town, where some 200 hogs are kept within 100 feet of nearest house. A remedy is sought as local board will do nothing.

March 7th, 1895.

R. T. Follis, Chester:

Reports a case where an animal diseased with cancer was seized and the owner fined $25.00 and costs.

March 15th, 1895.

Ezra Briggs, Bruce county:

Writes regarding an animal with cancerous tumor, whose milk was used.

August 16th, 189.

W. H. Hall Medical Health Officer, Chatham:

Stated that the meat of an animal with cancer of the jaw was seized, and on proof of cancer a fine was levied.

August 16th, 1895.

Dr. Hutchinson, Medical Health Officer, London:

Stated a similar case as occurring in that city.

January 23rd, 1896.

S. E. Thompson, V. S., Warkworth:

Writes twenty cattle were tested, fifteen out of the number were found affected with tuberculosis, four were slaughtered and the disease found to be well matured.

April 4th, 1896.

A. T. Reid, Orillia:

Reports a number of cattle as suffering from a disease resembling tuberculosis.

April 9th, 1896.

W. R. Fellows, Secretary Board of Health, Blenheim:

Asks for information *re* the law as to inspection of meat, and states that it is greatly believed that lump jaw is very prevalent in the neighborhood.

February 21st, 1896.

M. Campbell, Mayor, Chatham:

Writes that the council and himself are anxious to pass a by-law *re* the inspection of meat and cattle, and trusts the same will be done at once.

March 14th, 1896.

H. Cocie, Walkerton:

Reports a number of cases of lump jaw in cattle in his neighborhood, and attributes cases of cancer in human beings as being due to this disease.

March 28th, 1896.

J. Edwards, Moorefield:

Writes concerning a cow he bought suffering from lump jaw, and states that when the cow was killed that the liver and lungs were ulcerated.

April 23rd, 1896.

W. J. Douglas, Secretary Board of Health, Eglington:

Reports that certain cattle in his neighborhood are supposed to be suffering from tuberculosis.

The work done by municipal authorities, supported by ample legislative enactments is certainly most limited and unsatisfactory in the work of protecting against disease; and, as has been shown in the United States, no state legislative action has been effective in dealing with the inspection of cattle. Encouraged however by the comprehensive, systematic and scientific work of the Federal Bureau of Annual Industries, the State legislatures have within the past three years supplemented very largely Federal action. As in a peculiar sense the movement of cattle becomes interstate and interprovincial for purposes of commerce, it is quite apparent that nothing can be effective in Canada unless begun from this standpoint by the Federal authorities. When it is remembered that from 1889 to 1894 the export cattle-trade of fat cattle, of the United States, even with the embargo of the English schedule on all stockers was 22.5 per cent., while in Canada without any embargo and with the freedom to enter stockers, the increase of our export cattle trade was but 1.7 per cent., it is quite apparent that those interested in this important part of our national prosperity will do well to be guided by facts and not by self complacency.

P. H. BRYCE,
Secretary.

PART II.

PART II.

CHAIRMAN'S ANNUAL ADDRESS.

By Dr. J. D. Macdonald, Hamilton.

To the Members of the Provincial Board of Health :

Gentlemen,—In coming together again at the beginning of another year, it is allowable for us to express our pleasure that we see one another in the enjoyment of health and of fitness for the duties of our office; with our membership not diminished, and with a reasonable expectation that all may continue fit for such work as may be assigned to them during the months which are before us.

There is cause also to notice with satisfaction the general state of healthfulness with which the Province, as well as the Dominion at large, has been favored. No destroying epidemic has caused general suffering or loss of life. The sanitary authorities throughout the country seem to have been in a great measure watchful and active in efforts to stop the progress of such infectious maladies as may from time to time have broken out.

Small-pox has been an old subject of bitter reflection to this Board, appearing chiefly in the lumbering districts, being brought thither by vessels from the American side. It may be remembered that strong complaints were made by our committee on epidemics of the great want of precaution, on the part of our neighbors across the lake, against the increase of this malady, and of our suffering which ensued. It is a satisfaction to us to hear that both the supineness on the one side and the suffering on the other have come to an end in the meantime.

It has to be observed, however, that those outlying districts of our Province, communicating much, as they do, with the American side, require the continued exertion of watchfulness. The immigration into the States from so many regions of the globe will assuredly be accompanied by much infectious disease, of which an unwelcome share will reach us, and will spread among us and prove destructive, unless we are always prepared with an active organization for the purpose of stopping its progress.

It should not be again necessary to refer here to vaccination. It might be assumed that a moderately informed public is persuaded that the alternative presented to it being small-pox or cow-pox, the easier and safer experience is that of the latter. It has, however, to be admitted that boards of health and the medical profession still find it necessary to present, with what force they can, the advantages accruing from the choice of the lesser evil.

When at our last annual meeting, I had the privilege of addressing you, there was reason to refer to Asiatic cholera as an affliction from which, by a kind Providence, we had escaped. It was thought that we could justly give expression to a well-grounded feeling of security from that baleful malady from henceforth. It was conceived that late experience had proved that, by good organization on the part of sanitary officials at the various sea ports, the entrance of cholera into this continent could always be prevented; and no doubt it can be, if men and nations are only contented to pursue the paths of peace; but, men are not pleased to continue in these paths, and semi-savage Mohammadans are only a little in advance of a so-called Christian civilization in their readiness for general murder.

It would not have been thought necessary to revert to the subject of cholera on this occasion, were it not that the disturbed social and political state of those eastern countries in which cholera so often prevails, has led many to anticipate an outbreak of the scourge there. It may be supposed that, with the accurate knowledge of the origin of the disease, to which men have now attained, it will be an easy matter to prevent it from going beyond its more favorite seats. It is better for our Boards of Health, that they be themselves prepared to combat with this enemy at our own doors. Conditions seem threatened in the Eastern world and in Europe, if not also in America, which may place sanitary precautions in the background, and it may require our utmost care to prevent the addition of this to other troubles with which we are, in the meantime, apparently threatened. It is hoped, however, that American communities will have the wisdom to permit such measures as may effectually prevent the entrance of the scourge among themselves. If there is amongst us sufficient wisdom, there is sufficient knowledge to justify this hope.

Not so with the next scourge upon which we have to comment from year to year. Diphtheria is ever with us. Its bacillus wheresoever it may have acquired its original life, has seemingly succeeded in asserting itself as autochthonous. It appears everywhere and at all seasons, and if allowed favorable conditions is as malignant and distressing as ever. When we consider the cruelty of its symptoms, and the helpless dependence on parental oversight of the greater number of its subjects, we cannot but wonder at the unconcern with which communites so often regard its prevalence. The Board has lately had an example of this indifference to duty, and heedlessness of infant life on the part of a municipality situated northward, into which a "sore throat" had found its way and was being attended with much mischief. Deaths of children took place, several in a family as is the frequent rule in diphtheria epidemics, and were lamented with a certain resignation by parents and health officials; but nothing might have been heard of this beyond the limits of the township had it not been for the delivery to one of the families of the physician's bill. Following this there was a rising of interest of a very lively nature, which culminated in an appeal to this Board. Your committee, which was dispatched to make enquiry into the cause of complaint, giving its attention to the prevalence of the malady, found that the whole evil was due to the complainant, the means of prevention having been wholly overlooked by the sanitary officials; the very first steps recommended to them for the purpose of arresting infectious diseases having been wholly neglected on the part of all.

It seems in place here to say that for all such fatalities as have been adverted to, this Board can justly hold itself free from all responsibility, whether these may have resulted from mistakes on the part of physicians, or from neglect of sanitary precautions on the part of the proper authorities. Among the transactions of the Provincial Board of Health, necessary measures of prevention have been, on many occasions, discussed. Last January there was a very full report by the committee on epidemics, which had reference to diphtheria especially, and which, had physicians and municipal authorities read, they would have found something to their advantage. They would have, in some instances, been saved from needless loss, humiliation, and reproach.

The Board will remember that the secretary, at its last meeting, informed us that many phials of anti-toxine had been forwarded to infected districts, and that most favorable reports of its usefulness had been received from parties who had employed it. These reports we may hope to see scrutinized and compared with those from other sources, so that we may aid in the arrival at a correct and

reliable conclusion as to the endeavors thus put forth to lessen the various destructive results of this malady. There is still much discrepancy apparent among those who have had opportunities of witnessing or of performing anti-toxine injections. It becomes us patiently to wait until experience has become more uniform; in the meantime reflecting that even following so simple an operation as a hypodermic injection, there is a possibility of error, even in the detail of manipulation, and great room for differences of opinion in the estimating of the results.

Of typhoid fever we have heard comparatively little during the past year. We have not been free from it, but it has been neither so general as in other periods of its history; nor has its mortality been so great in proportion to such prevalence as it has had. If we take its prevalence in Hamilton as an example of its frequency elsewhere, we may safely say that we have not suffered much from typhoid. In a population of nearly, if not quite, 50,000, there were, during the year, ninety-six cases, and among those there occurred seven deaths, three of them taking place among the thirty-one people who suffered from the disease in October, and one in the seventeen cases which occurred in September, and three in March, being all the cases occurring in that month.

Hamilton is a well sewered city, but its sewage, once it gets beyond the city bounds, is not well disposed of, and there are not wanting those who say that some of it comes back again, while it appears that others, having conceptions of bacteriology of the nature of polymorphism, are of the opinion that the typhoid bacillus being so very like an ordinary water bacterium, may have become pathogenic and productive of typhoid as a result of its cultivation in a medium favorable to the evolution in it of that character. That, no doubt, is a very tempting and plausible theory, and it appears to obtain some strength and authority from the discussions of the experts in the science of bacteriology, as well as from a consideration of the simplicity of the structure of those very low organisms, which may be regarded as the first appearance of vitalized from unvitalized matter, the first step in evolution, so to speak. The experts do not look at all favorably on such scientific conclusions, and that on the part of unlearned people. In forming them, no doubt, the *profanum vulgus* is taking too much upon itself, and if induced by them to look upon typhoid and perhaps other troubles as unavoidable, so long as men drink water, it will do itself great harm, and will come to regard profound scientists with less respect than may be their due. The ignorant and simple, above all others have a right to question; and when they are told that certain bacilli are always found in water, even in great bodies of it, and that they come into it from the intestines of men and animals, they ask, in their own dull way, "Is it not possible that those organisms reach the intestines in the first place from the water, where, in one form or another, they have been primordially?"

Such reflections as these revolve themselves hazily in the minds of those who for the greater part pay the taxes, and thus have the claim to vote, and who have for some generations now been educated in the doctrines of evolution. Unless the labors of the experts prove, in their results, more definite than they have as yet, they whose enlightenment they seek, but who are already the victims of the tax gatherer, will rather join in the jeers so often directed against their scientific benefactors, than regard the difficulty of their work or the excellence of their aims. The people will be unwilling to incur increased cost for what, so far, seems to them of questionable necessity. We have to wait until the experts in bacteriology give us a sure description of the various forms

of bacterial life, that is to say until perfecting their science, they can show without question that those organisms, like others of higher kinds, can be divided into their orders, genera, species, and varieties.

When that consummation shall have been attained, and our minute destroyers are clearly exposed to our conception—their habits known—means may suggest themselves as being within the reach of our burdened communities, whereby they shall be able to provide effectually for their escape from many distressing visitations.

At the same time, while we may sympathize with municipalities which find it too burdensome to provide against the invasion of disease, we may remember that in a great many instances, their straitened circumstances are due to the dissipation of their means and the injury of their credit, by their expensive encouragement of business schemes, the promoters of which should be permitted to find their own capital, but by which these promoters, by certain judicious proceedings, succeed in showing that great benefits are likely to accrue, especially to all who are not concerned.

During the past year the Board has again had its attention drawn to the subject of tuberculosis. In the year preceding a strong hope had been entertained that science had bestowed upon us another signal service, and that a successful advance had been made towards the attainment of immunity from the results of tubercular infection. Now, however, that prospect is clouded. The hope is for the present at least abandoned, and therefore preventive medicine turns to dealing with this the cause of so much trouble and distress, in the manner which, so far, is alone known to be effective in hindering the progress of *all* infectious disease.

This Board accordingly has been giving its attention to impressing upon the community, and upon those in authority in Ontario, that if the evils resulting from tuberculosis are to be lightened, that most desirable end can be best and most surely reached by the withdrawal of those who are suffering from the infection of tubercle from association with those who are as yet in a state of health; and that this separation is as serviceable in securing increased comfort and prolonged life in the former, as it is essential in securing the escape from deadly infection in the case of the latter.

So anxious has the Board been on this subject that it has joined a number of benevolent gentlemen, and physicians of Toronto to bring this, as a great social need, under the notice of the Provincial administration. The application then made by those worthy gentlemen was clearly shown to be beyond the function of the administration, and so it failed. But the object was good, and it is one not to be dropped, but to be pursued in a more practicable way.

The difficulties in dealing with tuberculosis by segregation have already been the subject of remark before the members of the Board, but the opportunity may be taken now, further to allude to what in this affection are the peculiar obstacles to the course which, it is believed, we all recommend. These are found in the universality of the disease, and in the almost limitless degrees which mark its progress in different constitutions, and even in the same constitutions at different times, and under different conditions. All classes are its victims and there is no respect of persons in its behaviour towards any. Life in some instances is destroyed with a rapidity characteristic of affections which are acute and malignant, while in others the symptoms of disease are intermittent, and protracted for a long time, a losing battle being maintained against it, with occasional intervals of apparent truce for many years, its victims yeilding at last only when old age

coming to the aid of the destroyer, the power of resistance fails, and the struggle comes more quickly to an end. Between those extremes there is every degree of virulence. In examples of the latter kind, from their long continuance, the risk of propagation by infection is necessarily greater than in those of shorter duration and yet those are they in which the desired separation is most difficult to be brought about.

In the more acute forms it may often be possible to obtain from patients and from relatives a compliance with the advice that they should avail themselves of the accommodation of a "Home" or a "Hospital." But it must be expected that difficulty will be met with in persuading the population in general that those who have the symptoms of the more prolonged disease and who may be, nay so often are, family bread-winners, can ever become residents in such institutions in any great numbers.

At the same time none can well deny that it is the duty of preventive medicine as much as possible to attempt, in its own way, the mitigation of the evils of tubercular infection, and that having this end in view it is justified in insisting in the face of all controversy that there are benefits to follow the removal from among the healthy of those affected with any form of tuberculosis, those with phthisis especially, and for the purpose of effecting this removal, in striving to impress upon both public bodies and individuals the necessity for places of retreat for those who are sufferers from this malady.

It may come within the sphere of the duty of the Board to give consideration to the modes by which there may seem the greatest probability that such Homes may be placed where they may be of most service within our own Province of Ontario. It is not unlikely that we may be asked if we have counted the cost which is involved in what we assert is a necessity, and also if we have considered fully, and can in any wise show satisfactorily, the apportionment of the general relief which may result from the adoption of our proposal. This perhaps is not our function, but it would be a great gain if we could deal satisfactorily with these questions, although perhaps they cannot be answered except by the light of experience. In the meantime it seems to be evident that tuberculosis, being of universal prevalence, sparing neither rich nor poor—not the one more than the other—the procuring of such refuges as are proposed, for the numbers who need them, will appear to be such a heavy financial responsibility that few of our public bodies, provincial or municipal will venture to undertake it, especially when we reflect that those who in the greatest numbers need them are just the classes who can least afford to enjoy the benefits of them.

Here, however, it is encouraging to note the rise and increase of private hospitals in our own country as well as in others, and there is little doubt that those will more greatly increase. Pointing to these as an example we may hope to bring about on similar principles the creation, first of one here, and then another there, of "Homes for Consumptives." And it seems that efforts on the part of sanitary institutions and associations will be most usefully directed, which aim to influence general opinion on favored retreats for consumptives brought into existence in a similar way, some as private ventures and others as the fruits of a spirit of benevolence, the former for the well-to-do, the latter for the less fortunate amongst us.

As yet it cannot be said that we have the full countenance of the medical profession to our advocacy of those "Homes or Hospitals" for consumptives exclusively. Nor need we expect that aid if our endeavors shall be to provide a number of Governmental institutions with government officials in charge of them.

If such Homes are to be useful (while of course they are subject to Government inspections), they must have perfect freedom in their several modes of administration, and from none of them should the physician of the patient's choice be excluded. The conversion of medical men to the scheme of such Homes is essential to its success. Their interest as well as their professional zeal must be enlisted in its favor.

In fine the efforts of sanitarians should chiefly be to impress the minds of all with the fact that tuberculosis is the result of direct infection, and exorcise the hitherto fixed and universal persuasion that its origin is always hereditary. Once let the conviction prevail that consumption is truly and always the result of its own peculiar infection from without. Let the mode of its infection be generally understood; then the constant pressure of its presence will, sooner or later, impel society to the adoption of this means for protecting itself, and of affording comfort and some prospect of prolonged health and life to those of its members who are sufferers from this the most prevalent of all the evils which distress it.

QUARTERLY REPORT OF THE COMMITTEE ON EPIDEMICS.

TORONTO, November 3rd, 1895.

To the Members of the Provincial Board of Health:

GENTLEMEN,—Your committee begs to report on the public health for the past quarter since November.

The Province continues to be free from smallpox; no case having been reported during the quarter.

Reports from Michigan continue to state the presence of smallpox in Detroit, where it has been continuing for the last twenty months; cases are reported from Indiana, Wisconsin and one or two other neighboring states, it being epidemic in Texas and Tennessee.

One case was reported January 28th by the Quebec Provincial Board as being present in Missiquoi county. It was without doubt traceable to infected clothing from the United States. No further cases are reported from this district.

Typhoid fever, when prevalent in the autumn, has almost disappeared, there having been but few cases in Toronto or Brantford, whence recent reports have been received.

The action taken by the members of the Local Board of Health of Brantford is much to be commended; action having been taken to close some 108 wells reported dangerous.

Scarlatina has been found in several places as localized outbreaks. It broke out in the Barnardo Home at Peterborough, some eight cases having occurred up to November 22nd.

From the reports received it is gratifying to state that there has been no part of the Province where diphtheria has shown the same malignancy, or epidemic character that it did in the same period of 1894-95. That it has been present, however, is seen in the several reports herewith presented as in the Algoma district, Sturgeon Falls, Arnprior, Renfrew, Chesterville district, Dundas county, lumber camps in Hardy township, Muskoka, Dunchurch and Magnetawan districts, Carp district, Renfrew county, Manitowaning district in Manitoulin, etc., etc.

In addition to these districts, there have been orders for anti-toxin since September 1st from twenty-nine municipalities in nineteen counties to the amount of 125 bottles or $300.

Kent	2	Oxford	1
Simcoe	3	Lambton	1
York	39	Waterloo	2
Frontenac	2	Wentworth	2
Leeds	3	Huron	3
Prince Edward	1	Brant	1
Perth	1	Dundas	1
Wellington	1	Middlesex	1
Muskoka	2	Bruce	1
Lincoln	1		

As compared with this, it may be stated that anti-toxin was ordered in the three winter months of 1894-95 to the extent of 300 bottles or $675 worth.

The distribution of the anti-toxin may or may not indicate the prevalence of diphtheria in any district as its use must be considered as yet but partial. But it may be stated as a general fact that those who have used it once are those who use it a second time, in cases apparently likely to be serious.

The report for the similar quarter in 1894-95 gave seventy-five municipalities reporting the presence of the disease, in many cases as serious epidemics.

Whether owing to the general increasing accuracy of early diagnosis on the part of the profession or the increasing knowledge on the part of the public of the dangers of infection from diphtheria, we have to note the agreeable fact that the disease shows everywhere apparently a notably less prevalence and virulence than a year ago.

As will be seen in the report of Mr. Mackenzie, a more frequent advantage continues to be taken of the laboratory in the matter of diagnosis.

Arrangements are being made for still further facilitating the forwarding of specimens from the rural districts to the laboratory for examination. The great satisfaction obtained from positive knowledge as to the character of the exudation, on the part of the physicians who have taken advantage of these facilities, can hardly be comprehended except by those who have to treat cases; while the positive support it gives to the Medical Health Officer in maintaining isolation and keeping those infected from school, can only be understood by those who have known the serious disputes regarding cases in former years. In any cases of dispute some medical officers now regularly make use of the laboratory to determine the diagnosis. The practice has, we understand, become positive and regular in Toronto for the city officer to allow no child to return to school till a culture from the throat prove freedom from the disease.

A year has gone since the use of anti-toxin has become general. Its gradually increasing use is seen in the fact that while in Toronto a year ago only ten medical men purchased a supply from the Board of nineteen bottles to a total of 300 bottles sold; the last quarter's sales show seventeen physicians purchased thirty-eight out of 125 bottles used in the city, where there have been comparatively few cases of the disease.

The remarkable value of anti-toxin in diphtheria has long since passed the experimental stage, and all foreign statistics give unqualified testimony as to its value.

In the extended paper of Prof. Welsh, of Johns Hopkins University, nothing can be more conclusive than the figures there quoted; while the latest statistics of Dr. Monod, of Paris, state that in 106 towns of over 20,000 population each, the deaths in the first half year of 1895, as compared with the average from five previous years shows a reduction of sixty-six per cent. It would appear most unfortunate that there should exist longer any hesitation on the part of any physician, or medical officer of health, to take the fullest advantage of this result of modern biological research, while in the eyes of those who have studied most wisely it must be placed on the same plane as Jenner's discovery of vaccination. The Paris Academy of Science awarded, in December last, the prize for the most valuable discovery of recent years, equally to Behring, of Germany, for its discovery, and to Roux, of Paris, for the fuller development of the utility of anti-toxin in the treatment of the disease.

(Sgd.) C. W. COVERNTON,
J. J. CASSIDY,
PETER H. BRYCE.

REPORT ON A CASE OF RABIES IN EKFRID TOWNSHIP.

By J. J. Mackenzie.

Laboratory of the Provincial Board of Health,
Toronto, April 4th, 1895.

To the Chairman and Members of the Provincial Board of Health of Ontario:

Gentlemen,—I received from Dr. McEwen, of Melbourne, on Tuesday, March 19th, a box containing a portion of the skull and brain of a dog supposed to have been rabid, a full account of which is given in the correspondence.

Immediately on the receipt of it, I took a small quantity of the medulla oblongata, triturated in a sterile mortar with sterile beef broth and injected it underneath the dura mater of two rabbits. Rabbit No. 1 received about one-half cubic centimetre of the mixture injected far back over the cerebellum; rabbit No. 2 received about one-tenth cubic centimetre on the surface of the cerebrum. The following day I treated a third rabbit in the same manner. The morning following the operation the rabbits were quite well and the wounds healed rapidly by first intention.

The following is a table of the temperatures and weights of the animals from day to day:

	Rabbit No. 1.		Rabbit No. 2.		Rabbit No. 3.	
	Weight.	Temperature.	Weight.	Temperature.	Weight.	Temperature.
	gr.		gr.		gr.	
March 19	1,170	.....	790	.....	.....	.....
" 20	.....	.....	.....	.....	729	.....
" 21	.....	99.4	.....	98.5	.....	99.8
" 22	.....	102.8	.....	100.6	.....	100.8
" 23	1,136	100.8	774	97.8	731	100.5
" 24	.....	103.2	.....	102.4	.....	101.8
" 25	.....	103.8	.....	100.3	.....	101.4
" 26	1,065	102.0	823	100.4	766	98.6
" 27	.....	102.0	.....	102.0	.....	102.5
" 28	994	100 5	788	99.3	781	101.2
" 29	930	94.2°	759	100.4	816	102.2
" 30	.....	86.0	731	99.5	752	102.3
" 31	852	91.0	702	97.8	730	102.6
April 1	still alive.		695	97.4	809	103.
" 2	dead.		624	94.8	823	101.

Rabbit No. 1 died April 1st, rabbit No. 2 April 2nd. In the case of No. 1, the animal did not at first show paralysis, but rather great weakness. In the case of No. 2, the animal showed paralysis (complete) of the right hind leg and partial paralysis with hyperæsthesia of the left hind leg.

The postmortem results were practically the same in both animals, intense congestion of the whole central nervous system, but especially so of the spinal cord.

The incubation period is rather short for the first passage of street rabies in the case of rabbit No. 1, but that may be accounted for by the exceedingly large dose which he received. In rabbit No. 2 the period of incubation (fourteen days)

was about the average length of time for the first passage. Rabbit No. 3 is still living and has shown as yet no symptoms; to-day is the fourteenth day for it. To be absolutely certain, of course, it is necessary to pass the virus on through other rabbits. I propose doing this.

I think, however, that there is little doubt that the animal died of paralytic rabies.

I have the honor to be
Your obedient servant,

JOHN J. MACKENZIE.

(This letter is explanatory of the outbreak.)

[Copy.]

APPIN, ONT., March 17th, 1895.

DR. P. H. BRYCE,
Secretary Provincial Board of Health,
Toronto, Ont.

DEAR SIR,—Dr. McEwen, of Melbourne, will express you in a sterilized vessel and securely packed, the posterior portion of head and neck of a dog supposed to be rabid. I am not certainly aware that your laboratory has facilities for examining such a case bacteriologically, but send in the hope that you have. If so please demonstrate nature of bacteria present in this case (head has been frozen since 12th instant until packed), and if hydrophobia germs can be found let us know as soon as possible. If inoculation experiments are necessary please send word as to microscopic appearance of a section. Perhaps this should properly have been sent to Mr. Mackenzie, but the closing part of this will show why I send to you. Dr. McEwen may also address head to you, in which case please hand to Mr. Mackenzie.

The dog bit a young lad (say 17 years) on the backs of both hands, through a rather thin pair of woollen mitts, on Wednesday, the 6th instant. The dog at that time was not supposed to be rabid and had previously been a fairly even-tempered dog, but on the same night it left home, after making some attempt to bite its owner, and "took in" a circle of country of about ten or more miles, biting nearly every dog in its course and also farm and domestic animals and fowls. It attacked two or three people (as far as heard from) biting only one and that did not penetrate skin on account of a heavy glove, and it did not return home until Sunday, 10th inst., about 2 p.m.

On return it did not attempt to bite its owner or any of family. It was evidently sick and stupid, would not answer when called, eyes sunken and glassy, much emaciated, owner offered it bread and milk but would not touch them, a piece of meat placed in the mouth was immediately rejected with evident pain, did not bark or growl, prostrated somewhat, which increased, and on Monday night or Tuesday could only rise on front legs, hind parts being evidently paralysed, some convulsive attacks noticed but not severe, dog then killed.

In its course through country it passed through a village and bit every dog in sight. It would run from one group of dogs to another, biting and snapping and not stopping to fight. Other dogs, on its approach, would run away from it, although some of them had the reputation of being good and eager fighters.

I did not mention that saliva was scanty and thick and ropy when seen at home on Sunday and Monday.

In my opinion all clinical symptoms denote rabies, but would not affirm such without a laboratory examination.

The township council has been asked to defray expense of sending bitten lad to New York Pasteur Institute for treatment. Dr. Gibier telegraphs me that cost for minimum period of treatment of fifteen days will be $200 and board $50. Have requested of him if any reduction cannot be made. Boy's parents unable to pay anything towards cost as I am informed they are very poor, barely making a living for themselves.

Our Council wishes to know from you if Provincial Board will bear any of cost in case they decide to send him. They do not wish to incur expense unless they are reasonably sure of dog having hydrophobia and not some simulating disease.

In case you cannot examine parts sent, please wire on receipt—what proportion of cost Board will pay, if any, and oblige.

Yours sincerely,

(Sgd.) L. HYTTENRAUCH, M.D.

P.S.—Also, has local Board of Health power in this matter.

L. H.

REPORT OF THE COMMITTEE ON EPIDEMICS ON A HOME FOR CONSUMPTIVES.

To the Chairman and Members of the Provincial Board of Health :

TORONTO, January 17th, 1895.

GENTLEMEN,—Your committee has for several years reported on the problem of how to lessen the great death rate from tuberculosis in Ontario, and presented at the last quarterly meeting, proposed regulations for placing tuberculosis on the list of notifiable diseases.

The more, however, that the problem is studied, the greater the urgency seems to be, for the establishment as a corollary to such compulsory notification of a Home for consumptives on some inland and elevated tract of warm and dry soil protected by an evergreen forest growth, and conducted under conditions which have been found most successful wherever such sanatoria have been established.

It would further seem to your committee that such provision can only be realized in the near future by its establishment being undertaken by the Government, and that thereafter, when it has gained public recognition, the counties might be encouraged to establish in favorable localities similar Homes, modelled on that erected by the Government.

Such a Home would necessarily be something between an hospital and a sanatorium, the maintenance of which might be in considerable part provided for by the products of agricultural, horticultural and other industries, and by the moneys received from pay patients of the better class.

The arguments for the establishment of such an institution may be briefly summed up as follows :

1. That according to the Hospital Report for 1892 one patient of every twenty amongst the 11,008 inmates of the General Hospitals of the Province were tuberculosis ; while almost as many more, or 4.5 per cent., suffered from acute bronchitis or pneumonia, a considerable proportion of whom, according to medical experience, are likely to have subsequently developed consumption.

2. That the amount of Government aid to the hospitals in 1892 for the maintenance of this number of 1,197 patients was at the rate of, say thirty cents per diem, $359.10, which if the number were maintained for the whole year would have amounted to $131,071.50.

3. That the General Hospitals in the different cities of the Province have not in any single instance, as far as I am aware, any method, as by separate wards, for preventing these consumptives (one in every twenty) from mingling with patients suffering from acute and exhausting diseases, which render them especially liable to inoculation with tuberculosis.

4. That with 750 deaths in the twelve cities of the Province during 1892 from tuberculosis, and probably as many more persons suffering from the disease, there was as a result a notable danger of such persons spreading the disease not only within their own families, but also amongst their fellow-workmen and workwomen so long as they were able to perform labor, forced upon them by their limited means.

Other arguments put in a more general way have been presented in the Report on Tuberculosis prepared by your Secretary and published by the Board last year, as well as in articles read before the Association of Executive Health Officers in August last and published in that report.

Proposals to establish an hospital for consumptives in Toronto have, as you are aware, been made, but so far the idea has taken no definite shape.

However valuable such an institution if established will become, it cannot as an hospital fulfil the conditions which must recommend themselves to your committee. As is well known the lakeside cities and even rural municipalities bordering on our great lakes have an incidence of deaths from consumption notably greater than the inland and more elevated counties. The following table, published before in previous papers, may be repeated, and year after year may be illustrated.

Deaths from Tuberculosis in cities in 1891, 1892, 1893, in Ontario.

Cities.	1891, ratio per 1,000 of population.	1892, ratio per 1,000 of population.	1893, ratio per 1,000 of population.
Toronto	2.4	2.5	2.6
Windsor	2.7	1.2	1.6
Kingston	2.2	2.1	1.8
Hamilton	1.8	1 5	1.7
Brantford	1.7	2 0	2.4
London	1.6	1.3	1.3
Belleville	1.4	2.9	1.7
St. Thomas	1.4	1.2	.9
St. Catharines	1.3	2.9	1.9
Ottawa	1.2	1.8	2.4
Guelph	.9	1.5	2.1
Stratford	.8	.9	1.1

It seems, therefore, apparent that the location of such a Home of a provincial character must be chosen with a view to the very best location from the climatic and geological standpoint.

It has been stated elsewhere that basing the calculation on the annual death rate probably a number approaching 5,000 consumptives are at any one time living within the Province. If it were assumed that even a number equal to those treated at present in hospitals for tuberculosis and other pulmonary complaints were provided for gradually, it would mean an institution not larger than one of the Provincial Institutions for the Insane at the present time.

Without going further, however, into the question, your committee believes the time has arrived when the demand for such an institution is general.

It commends itself to the Inspectors of the Department of Public Institutions both from the public health and economic standpoints; and your committee would therefore recommend the adoption of the report with instructions to have it forwarded to the proper authorities for consideration.

This is all the more urgent in view of the fact that your committee has not been informed of the making of the Order-in-Council *re* Compulsory Notification of Consumption; while your committee may further state that the point was raised in the discussion of the regulations with the Government, that if the consumptives were prevented from engaging in employment in workrooms and factories where mingling with others was necessary, what other disposition of them was at present possible?

All of which is respectfully submitted,

C. W. COVERNTON,
P. H. BRYCE,
Committee.

INTERIM REPORT ON THE OUTBREAK OF TYPHOID FEVER IN BRANTFORD.

To the Chairman and Members of the Local Board of Health, Brantford:

GENTLEMEN.—Having learned of the prevalence of fever in Brantford, and having had forwarded samples of city water for analysis, with the information that its purity was being questioned by some people, on the authority of one or more prominent physicians, I have taken the earliest opportunity of investigating the matter with the object of determining, if possible, the principal causes of the outbreak.

I have to thank the several city officials for their courtesy and energy in collecting and collating the large number of details which are summarized in the tables hereto attached, and which will be herein referred to for reference.

Causes.—Typhoid or more properly *enteric fever* (because the effects of the disease are specially located in the intestines) is now known to be caused by a specific germ (or minute organism allied to the fungoid family) which multiplies in the intestines and thence in the blood, and in probably all cases reaches the blood by way of the digestive tract either in drink or on food, or if inhaled. It is carried thence from the mouth and posterior air passages on food or in drink. Though not readily multiplying outside the body, the germ undoubtedly at a temperature above 60° F. seems capable of multiplying in organic matter, and notably in the water of wells, where not exposed to the free action of fresh air and sunlight. Hence shallow wells whose temperature rises in the summer, and which become impure from the soakage through sandy soils, of organic pollution, notably from privies, stables, etc., are polluted by the two sources from which typhoid practically always emanates except when the same materials get into the public drinking water from the sewage of towns. I find by reference to the reports of the past five years that the total cases of typhoid, and especially the total deaths therefrom, in Brantford have been very notably less than in the period prior to the general use of city water.

As the total services are 1,790 (with the factories excluded), it may roughly be calculated that 9,000 persons regularly use city water, or some three-fifths of the total population.

After several years of relative immunity with an annually increasing number of water-takers, it was perhaps natural that many should conclude that the notable prevalence of typhoid during the past three months in Brantford ought to be considered as due to the common source of drinking supply. Such, however, have not known or not considered, that while the conditions of public water supply have not altered from several preceding years, those peculiar to well water have.

Thus the temperature of—

May exceeded the average of forty years by			3.2° F.
June	"	"	1.6° F.
July was below	"	"	1.8° F.
August	"	"	0.8° F.

and with these began and continued, notably in the Brantford district, a drought unprecedented in Ontario.

Thus the rainfall—

Fell below the average in May by			0.60 inches
"	"	June "	2.21 "
"	"	July "	0.51 "
Exceeded	"	August by	0.41 "

To such conditions of unusually low ground water was added that of the greater tendency of all liquid sources of pollution in the neighborhood to soak towards the lowest point, and thus become possible by the succession of rains in August and September.

There has thus been a maximum of pollution with a minimum of dilution, with an unusually high ground water temperature. Thus at the waterworks station, the water whose normal is 52° F. was found to be 65° F. or greater by 7° F. than in 1893, when I tested it. The temperature of other ground waters will have risen relatively to the amount used and to the depths of wells.

That the city water is the same water it has ever been is seen in the subjoined chemical analysis of 1893 and 1895.

That it is practically a sterile or filtered water is seen in the following table of comprehensive bacteriological tests made on September 21st, 1895 :

Bacteriological test made on September 21st, 1895.

Sources of several samples.	Amount of water taken.	No. of colonies (*i.e.*, No. of bacteria at time samples were taken.)	Notes.
1. Tap in engine house	1 c. c.	16	
2. Old creek reservoir	1 c. c.	320	
3. Canal	1 c. c.	270	A few gas-producing forms.
4. Old well, 50 feet from privy	1 c. c.	2,052	
5. Driven well at greenhouse, 20 ft. from manure heap and 60 ft. from privy	1 c. c.	307	

That it differs much more from polluted wells, communicating with the surface, even as a driven well is seen in the above table, and what ought to have been remembered by those using town water, is that the river water relative to local pollution is infinitely more diluted than a pit well with sunlight excluded and subject to constant local contamination. These differences are shown in the table.

The freedom from suspicion of city water is, however, capable of demonstration by other than mere chemical figures. If Ward III. be taken for illustration in the tables, it will be seen that the density of population there is $2\frac{1}{3}$ times as great as in the next two highest, viz., Wards II. and V., and four times as great as in I. and IV.

But more than this, the soil pollution of III. is that of some 60 years, while much of the other territory has only been recently occupied.

Naturally, therefore, whatever wells still remain in Ward III. are peculiarly dangerous owing to this factor of progressive soil pollution ; for while ash closets largely exist, soak-pits are not yet all abolished nor the earth of old ones all renewed. There cannot, however, be many wells used, although existing unfilled ; but that some have been re-opened this summer for cooler water is beyond question This has, unfortunately, been greater owing to the suspicion which seems to have attached to the city water. That their total is, however, small, is positively proven by the fact that there are in Ward III., with a population of 3,457, some 693 consumers, or one taker for every household of five persons. It naturally follows therefrom, that if with relatively few drinkers of

well water twenty-one cases occurred where wells only were used and one case with both wells and city supply, and if with practically 3,457 persons to whom city water was available, there were but twenty cases in houses where it alone was used, we must unquestionably conclude that the well water is exceedingly dangerous and that well water accidentally drunk, filthy cellars or privies, or some other specific cause, must be held accountable for cases in houses where city water is usually used.

It may, however, be urged that in Ward II., where the population is only 9.8 to the acre, where the lots are large and the premises cleanly, and the city water takers are as one to seven and a half persons, that there ought to have been a natural absence of cases if the city water had not been a factor. We there find, however, that the cases are almost equally divided between premises with city water (31) and those with the well water (34). Now assuming that the wells are in such a soil largely free from pollution, and that ash closets generally prevail and that the city water is not the cause in those houses where it is introduced, and that many wells are free from suspicion, we are left to the alternative of the only other probable source, viz., the milk supply. Now what we do find is that one particular milk is associated with twenty out of seventy-four cases of typhoid which have occurred in Ward II., and that the balance are distributed amongst thirteen other milk vendors. In other words, one milk vendor supplying 119 families has typhoid occurring in twenty of these while thirteen others supplying 1,094 families have fifty-four cases distributed amongst them, and of these fifty-four, six are associated with one other milk vendor.

This argument receives additional force from the fact that of the total families supplied by the first mentioned milk vendor, distributed over other wards, twenty-one per cent. have had cases of typhoid, and of the last mentioned vendor, with families in one ward only, some fifty per cent. of all have a case of typhoid.

That these two supplies stand in a very different category from all the others, is seen from the fact that with many other dealers with as many families none have higher than seven per cent. of cases, and an average of four per cent.

If, however, further evidence as to the unwarranted suspicion which has attached to the city water is required, it may be found in the progressive character of the cases in the matter of time.

Water-epidemics (*i.e.*, from public water supplies) have invariably been of an explosive character. Thus in six weeks in 1887, 1,600 cases occurred in the city of Ottawa, most of these, indeed, within three weeks.

In the present outbreak, as seen in the tables, the disease has progressed gradually and has kept time with the period of increased rain fall after the drought.

Recommendations.

These are apparent from the facts tabulated, and are deductions drawn from them.

1st. Reduce the cost of city water to the smallest point consonant with the demands for revenue.

2nd. Order the closure and filling up of every well in Ward III. before next June, and immediately of all wells associated with typhoid, or which in the opinion of the medical health officer and engineer are situated so as likely to become dangerous.

3rd. Have an immediate and special examination made of every dairy, and especially of the source of water supply, both for cattle and for the cleansing of milk vessels.

4th. Withdraw the permits of all whose water supplies are from wells so situated as to be liable to contamination, until a new well has been driven or dug in such position as is approved by the medical health officer and by the engineer.

5th. Require compliance with the Act regarding notification by physicians and householders, since had notification been made, early and regularly, the prevalence of the disease to its present extent would not have been possible, and the suspicion attaching to the public water supply, by an early investigation of the local conditions where cases had occurred, would not have resulted.

I have the honor to be,

Your obedient servant,

P. H. BRYCE,
Secretary.

TABLE I.

TABLE SHOWING CASES OF TYPHOID FEVER IN BRANTFORD.

Total cases supplied with city water	58
" " well water	100
" unknown supply	9
" with both supplies	7
Total cases	167

TABLE II.

TOTAL CASES BY TEN DAY PERIODS BEGINNING WITH JULY 1ST, AS PER REPORTS OF PHYSICIANS.

From July 1st to 10th, inclusive	2 (includes 1 from June).
" July 10th to 20th, "	4
" July 20th to 31st, "	13
" Aug. 1st to 10th, "	17
" Aug. 10th to 20th, "	8
" Aug. 20th to 31st, "	22
" Sept. 1st to 10th, "	38
" Sept. 10th to 20th, "	30
" Sept. 21st to 23rd, (3 days)	4
Unknown date	3

TABLE III.

REPORT OF THE OUTBREAK OF TYPHOID IN BRANTFORD.

Ward 1.

Area, 600 acres. Population per acre, 5.5 persons.

Population 3,349 ..... c, 4 ..... Ratio of cases, 1 to 209 persons.
Cases 16 ..... w, 11 ..... City, 25 %
Wells, 75 %

City water consumers 305. Ratio 1 to 10 persons.

Ward 2.

Area, 340 acres. Population per acre, 9.8 persons.

Population 3,372	c, 31	Ratio of cases, 1 to 45 persons.
Cases 74	w, 34	City, 42 %
	c and w., 7	Wells, 46 %
	Unknown 2	Both, 9 %
		Unknown, 3 %
City water consumers 451.		Ratio 1 to 7½ persons.

Ward 3.

Area, 162 acres. Population per acre, 22 persons.

Population 3,437	c, 20	Ratio of cases 1 to 82 persons.
Cases 43	w, 21	City, 48 %
	Both, 1	Wells, 48 %
	Unknown, 1	Both, 2 %
		Unknown, 2 %
City water consumers 693.		Ratio 1 to 5 persons.

Ward 4.

Area, 453 acres. Population per acre, 5.8 persons.

Population 2,633	c, 5	Ratio of cases 1 to 109 persons.
Cases 24	w, 15	City, 21 %
	c. and w., 1	Wells, 62 %
	Unknown, 3	Unknown, 13 %
		c. and w., 4 %
City water consumers 138.		Ratio 1 to 19 persons.

Ward 5.

Area, 310 acres. Population per acre, 9.2 (excluding Globe).

Population 2,866	c, 0	Ratio of cases 1 in 179 persons.
Cases 16	w, 13	City, 00 %
	c. and w., 2	Wells, 81 %
	Unknown, 1	c. and w., 13 %
		Unknown, 6 %
City water consumers.		Ratio 1 to 14 persons.

From the further investigations regarding the causes of the serious outbreak of fever in Brantford, made by myself and Mr. McKenzie, who executed the laboratory examination of water samples appended hereto, it is still more apparent than ever, that the city water is not only absolutely free from the taint of suspicion, as a cause of typhoid, but that the majority of wells examined, illustrate a degree of pollution such as to make them not only suspicious, but to have been the probable causes of many cases which have occurred.

It will be well, however, that the condition of the ravine on the island, where a source of supply is taken, be improved so as at all times to make it possible to maintain a reservoir of water, for extra consumption after filtering, as pure as the river supply makes possible.

This it is recommended be done in the following manner:

1. Clear out all vegetable mould from the deepest part of the ravine for a reservoir, and close off the upper portion of the ravine which ought also to have its vegetable matter removed, and afterwards be levelled up.

2. Bring up the lower part of the ravine to a grade such as will protect against standing water.

3. Lead a tile-drain from reservoir to the outlet of the creek, and place at mouth of creek a drain with a culvert, to allow the flood waters to flow off: but also have the drain supplied with a valve to keep out the high water of the spring floods.

This drain from the reservoir will serve to maintain at all times a fresh supply of water in the reservoir, which will receive water from the canal supply.

If in addition to this supply, a reservoir be desired, it may readily be added by laying a series of sub-soil field tiles beneath the frost line to the north of canal, and further to the south of reservoir, which can be steadily supplied from the canal.

By these methods, the filter bed for these supplies will be some 600 to 800 feet from the well, and by it we may conclude the present filtration will, if possible, be made still more perfect.

All of which is respectfully submitted,

(Sgd.) PETER H. BRYCE, M.D.

APPENDIX TO BRANTFORD REPORT.

TORONTO, Nov. 12, 1895.

To the Chairman and members of the Provincial Board of Health :

GENTLEMEN,—Acting under instructions from Dr. Bryce, I proceeded on Thursday last to Brantford for the purpose of making bacteriological examination of the water supply of that city.

My results are not, as yet, complete, but I beg to submit a preliminary report upon such as I have obtained.

I examined in all fifty-one samples ; of these eleven were from various parts of the public water supply, two from the Grand River, two from the canal, one from Dead Creek, one from a creek which was used for watering the cows of one of the milk dealers, and the remainder from private wells, in connection with the majority of which there had been cases of typhoid.

In making the examination I, in all cases, made a quantitative estimate of the bacteria growing at room temperatures ; in a certain number of cases I also estimated the number growing at blood heat ; and finally I am engaged at present in a qualitative examination of all those forms which, from their appearance, are either suspicious or peculiar. This latter part of the work will take a number of days to complete.

Samples from public water supply :

No.	Date.	Description.	Bacteria per c.c. at 22° c.	Bacteria per c.c. at 36° c.	Remarks.
1	Nov. 7..	Tap in police office.....	84	5	Practically only one form developed in the plates at 37° c. This has been isolated for further study. It proved to be a form which liquified gelatine and had no significance as evidence of pollution. Over 30 per cent. of the colonies in this sample belonged to bacillus subtilis.
2	" ..	Tap in Victoria Park	80	12	
3	" ..	Tap at house of Mr. John Fax	70	7	
4	" ..	Tap at house of Mr. C. B. Heyd...	60	2	
6	" ..	Tap at water-works	60	7	
7	" ..	Well at engine house.....	96	none	
10	Nov. 8..	Tap at waterworks	252	not determined	
12	" ..	Sample from the bottom of the well at engine house.	48	"	
13	" ..	Tap at the house of Mr. Pearce....	40	"	
38	Nov. 9..	Tap at waterworks	226	"	
39	" ..	Sample from the bottom of well ...	164	"	

Samples from the Grand River:

No.	Date.	Description.	Bacteria per c. c. at 22° c.	Bacteria per c.c. at 36° c.	Remarks.
5	Nov. 7..	Canal water near waterworks	1,350	21	
11	Nov. 8..	Canal water near waterworks	1,860	not determined	
40	Nov. 9..	River at Wilk's dam.....	2,560	"	
41	" ..	River at Dockett's.....	2,000	"	
37	" ..	Dead Creek	3,150	"	

Samples of well waters:

No.	Date.	Description.	Bacteria per c.c. at 22°.	Bacteria per c.c. at 37°.	Remarks.
14	Nov. 8..	Mr. Geo. Hall's well; a driven well 14 ft. deep; sandy soil; scant supply.	190	7	
19	" ..	Mr. A. Matthew's well; a driven well over 20 ft. deep (20z Market st.)	520	3	
21	" ..	Mrs. McCormick's well; a driven well recently deepened; supply was scanty, is now better 14 ft. deep.	7,200	21	
27	" ..	Mr. Pringle's well; a driven well, shallow in low ground; considerable fever in neighborhood.	650	not determined	
29	" ..	Mr. Dooley's, Dufferin st.; a driven well 12 ft. deep; good supply.	1,340	"	Six different species present in this water.
33	" ..	Mr. John Rayner's well; a driven well 12 ft. deep, in the old settled part of the town.	350	"	
34	" ..	Mr. Quinlan's well; a driven well 12 ft. deep, in old settled part of town.	800		
35	" ..	Well near cemetery; a driven well 13 ft. deep.	1,410	46	
49	Nov. 9..	Mr. Douglas' well; a driven well in cellar, 12 ft. deep; fever in past years.	1,040	not determined	
15	Nov. 8..	Mr. Norris' well; pit well 53 ft. deep, on Terrace Hill.	21,000	555	Eleven species present in plate at 22°c.
16	" ..	Mr. Priddle's well; pit well, 14 ft. deep; scant supply; old closets in the neighborhood.	1,200	125	

Samples of well waters,—Continued.

No.	Date.	Description.	Bacteria per c. c. at 22 °.	Bacteria per c. c. at 37 °.	Remarks.
17	" ..	Schooley's well; pit well, 55 ft. deep, on top of Terrace Hill.	1,590	22	In plate at 22 ° c. four species were present.
18	" ..	Mr. Judd Buck's well; old pit well on side of hill, 20 ft. deep; sandy soil.	18,600	615	Ten species present in plates at 22 ° c., amongst them colonies of a proleus form.
20	" ..	Dr. Digby's well; a pit well, stone and brick walls; no history of illness; 14 ft. deep.	710	200	The colonies in this plate at 37° c. were very small. In the plate at 22 ° c. only two forms were present, B. punctated and a small non-legorfying colony.
22	" ..	Windle's well; a pit well in worst locality of town; 12 ft. deep; scanty supply.	40,000	1,300	
23	" ..	P. Robertson's well; pit well 16 ft. deep; old neighborhood.	2,840	167	Ten species present in plates at 22 ° cr
24	" ..	Smale's well; pit well 14 ft. deep; scanty supply.	over 19,000	not determined	
25	" ..	Hunt's well; pit well over 20 ft. deep; close to school on brow of Terrace Hill, near old pits and closets belonging to school.	5,500	97	
26	" ..	Eckert's well; pit well 14 ft. deep; had been cleaned out and deepened a week before taking sample.	109,200 (approximately)	784	
28	" ..	Tucker's well; pit well 12 ft. deep; low ground, near privy pits, bad locality.	250	not determined	
30	" ..	Well in Jackson's Row; similar to Tucker's.	1,200	"	
31	" ..	Syke's well on Niagara st.; pit well 14-16 ft. deep; scanty supply.	1,760	"	Seven species present.
32	" ..	A. Wilson's well; pit well, close to Buck's Foundry; old neighborhood; scanty supply.	12,540		
36	" ..	Herron & Johnson's well; pit well in cellar on hill.	2,080	"	
42	Nov 9..	T. Robson's well; pit well not less than 20 ft. deep; very good neighborhood on Eastward Plateau.	880	40	
43	" ..	Haffey's well; pit well 12 ft. deep; in west Brantford.	860	270	
44	" ..	Buck's foundry well; pit well; supplies all the men at foundry (200); not a good locality.	3,700	120	
45	" ..	Richardson's well; pit well 12 ft. deep; locality same as last; supplies three families.	1,550	204	

Samples of well waters.—Concluded.

No.	Date.	Description.	Bacteria per c. c. at 22 °.	Bacteria per c. c. at 37 °.	Remarks.
46	" ..	Patton's well; pit well 27 ft. deep; on Terrace Hill, houses higher up; a milk dealer.	1,770	not determined	
50	" ..	Wallace's well; pit well 12 ft. deep.	3,150	"	
51	" ..	Well at Mohawk Park; 12 ft. deep; new well; abundant supply; isolated.	1,600	"	
47	" ..	Patton's creek, 200 yards from hog-pens, which drain into it; cattle sometimes watered here.	over 40,0000	"	

REPORT OF COMMITTEE ON EPIDEMICS *RE* DIPHTHERIA IN PROTON TOWNSHIP.

To the Chairman and Members of the Provincial Board of Health:

GENTLEMEN,—Your Committee on Epidemics having met on the 24th August inst., learned from the reading of correspondence between Dr. Bryce and the local Board of Health of the township of Proton, in the county of Grey, that a serious disease of the throat had caused five deaths in the family of Mr. John McLuhan, and also that conflicting opinions were expressed as to the nature of the disease.

After consultation the Committee deemed it wise to hold an investigation, and a letter was sent by your secretary to Mr. James Cavanagh, secretary of the local board of health of Proton, informing him that a Committee of your Board would sit at Dundalk, county of Grey, at 2 p.m., August 28th, to make the necessary investigation, and further requiring him to see that the necessary witnesses should be notified to attend.

Dr. Bryce being unable to leave town on that day, a Committee, consisting of your chairman, Dr. J. D. Macdonald, and Dr. Cassidy, a member of your Committee on Epidemics, went to Dundalk and opened the enquiry in the parlor of the McCulloch House in that village at 2 p.m., August 28th. The secretary of the local board of health of Proton, Mr. Cavanagh, acted as clerk and wrote down the evidence. The witnesses were sworn and questioned by your Committee as to their knowledge of the matter at issue. The history of the disease, and also the condition of sanitary matters in Proton:—In order to elicit the important facts as completely as possible, the enquiry was conducted along certain lines, which had been pre-determined by the Committee. Sub-joined is the evidence:

EVIDENCE.

John McLuhan, farmer, of the township of Proton, being sworn, deposed as follows: I do not remember the date on which the first illness took place in the family—none of the family had been from home during a fortnight.

William had been at a raising for an afternoon, four days previous to his illness.

I do not know of my own knowledge of cases of diphtheria having occurred in the neighborhood—my son told me he had been in company with and had drank water from the same cup with a companion who had a sore throat, four days before he got ill—the disease appeared to be common sore throat, the doctor's opinion was at first it was not contagious; the young man, William, was going up and down amongst the family—my son called on the physician two days after his throat became sore—no instructions were given by the physician as to isolation. My wife and I nursed the sick patients; we were not isolated from the other members of the family.

(Sgd.) JOHN MCLUHAN.

Mary McLuhan, wife of John McLuhan, being sworn, deposed as follows: The disease was not thought serious at first; having heard the testimony of my husband, I agree therewith. My son Henry lived eight days after the disease commenced; he died on the 8th day of July, 1895. Robert died on 14th July, 1895, having been ill one week. Luella died on 14th July, 1895, having been ill five days. Annie Louisa died on the 28th July, after an illness of ten days. Eddie died on the 6th August, after an illness of five weeks. I consider that the disease was serious, never having seen that kind of sore throat before.

Dr. Clendenan, at the time of his visit to my son Henry, stated it was not diphtheria, only common sore throat, and that the two little girls, who at that time did not have the disease, if attacked would have it lightly—after Robert's death was the first intimation as regards isolation.

(Sgd.) MARY MCLUHAN.

Arthur Edmond Clendenan, M.D., Toronto University, Conn, township of West Luther, county of Wellington, being sworn, deposed as follows:

I saw the first patient of the McLuhan family on the 23rd June, 1895—the patient's age about twenty-three years. The patient consulted me at my office at Conn. His temperature was about 100 degrees; appetite good; examined throat, found some spots on the back of throat, and I also noticed there was a hoarseness and difficulty in speaking. I diagnosed the disease as laryngitis, combined with pharyngitis. I informed him that the disease might or might not be infectious; the patient received medicines from my office once, and called three times at my office, but I did not see him for eight or ten days after the first consultation. No measures of disinfection or isolation were practised by the McLuhan family, so far as I know. I next saw the patient about eight or ten days after the first consultation; I examined his throat and found membrane which was beginning to peel off. I inferred from seeing the patient going about that he had not been confined to his room and had not been isolated.

On July 6th I visited the McLuhan family, and saw Henry McLuhan. I found that he had well marked laryngitis with symptoms of fibrinous exudation in trachea and lower parts of pharynx, which was shown by hoarseness, difficulty in breathing and cough. Within four or five days four others of the family showed symptoms of the same disease; in two of the cases there was pharyngitis with membrane, and in two there were spots in their throats—in two of these cases last described laryngitis appeared from the first. I consider that forms of sore throat other than diphtheria are communicable, and I do not consider isolation in such cases necessary. In distinguishing between membraneous croup and laryngeal diphtheria a bacteriological examination is required.

I have never received a copy of the Diphtheria Regulations and was not aware of the nature of them. I am aware that facilities for the examination of membrane in doubtful cases of sore throat have been supplied by the Provincial Board of Health. I would isolate cases of diphtheria for a period of one month or longer. There were three cases in the same family affected in a similar manner; of the eight cases five terminated fatally and three are convalescent. In those three cases there has been some pharyngeal but more laryngeal symptoms of paralysis.

(Sgd) Arthur Edmond Clendenan.

Robert Menzie Mitchell, M.D.C.M., Medical Health Officer, township of Proton, being sworn, deposed as follows:

I am Medical Health Officer of the township of Proton. I first heard of the sickness in Mr. McLuhan's family August 15th. The local board of health met August 17th. I went to the McLuhan homestead, August 19th, along with Mr. McKenzie, a member of the local board of health. I examined the house and premises and found them in a good sanitary condition; disinfection had been done by the people of the house. There were three rooms on the ground floor and three on the first floor of the house. There was an attic room above the fourth floor. There was also a one-story kitchen extension, connecting with the ground floor. I ordered the above mentioned attic to be treated with carbolic acid fumes. The kitchen I also ordered to be treated in the same fashion, after the wooden walls had been stripped of paper. The carpets taken from the floors of the rooms used by the patients were burned, some curtains were burned and some put in boiling water. The clothing was destroyed or put in boiling water. Feather beds were also put in boiling water (feathers and cover). Some of the clothing was treated by dry heat in an oven. Mr. L. Beard practising isolation and disinfection in contagious diseases. The three children who had had the disease had paralysis of the throat. Liquids were regurgitated back through the nostrils when the patients endeavored to swallow. There was also weakness of the voice. They were able to walk about.

(Sgd.) R. M. Mitchell, M.D.

James McLuhan, farmer, township of West Luther, being sworn, deposed as follows: William McLuhan was at a raising at George Gibson's, in West Luther, on Tuesday, and on Friday was at my place and complained of feeling poorly—ill, and in need of rest—tired, and threw himself down on the grass, which was

not his nature. On Sunday following met him riding home in a carriage from visiting the doctor; his neck was swelled on the right side and his throat was very sore. I did not see him for four days afterwards, on the day preparatory to the raising at his father's. I saw him at the house. I looked at his throat; he had much difficulty in opening his mouth and protruding his tongue, so that I could not see down his throat. He was much reduced in flesh. Isolation resulted from the efforts of witness solely; thinks if all the children had been taken away their lives might have been saved.

(Sgd.) JAMES McLUHAN.

Elizabeth Funston, the wife of Thomas Philip, being sworn, deposed as follows:

I went to his father's house on the day of the raising and saw William, he was very ill on that day. I asked the doctor if it was not right to use carbolic acid, the doctor did not think there was any danger of disease being contagious.

(Sgd.) ELIZABETH PHILIP.

Joseph McArdle, chairman of local board of health, township of Proton, being sworn, deposes as follows:

Members of local board of health are all members of the Council. For the last three years the Council has appointed the members for its own body, and all members of the Board are present at the meetings, the expenditure on account of the Board to date, about $50.00, the population of township, 2,930, the assessment $804,710.00. The Medical Health Officer is appointed each year, remuneration according to service rendered, no annual salary paid. And we have no special sanitary officer, I know nothing about the supply of blanks relating to contagious diseases, to medical practitioners and school teachers; when a case of contagious disease is reported, the procedure taken is as follows:

A meeting of the Board is summoned, and attendance of Medical Health Officer required, and directions given him as to steps to be taken, which he is to carry out. Where the case arises of persons who are unable to carry out disinfection or isolation to prevent spread of disease through poverty, the Local Board would in such case defray expense incurred.

(Sgd.) JOSEPH McARDLE.

Dr. A. Ed. Clendenan, recalled. After the attack of the second one, (Henry), I pronounced the disease malignant, croupous, but not diphtheritic in its character. I understood that the healthy ones were in the back part of the house, after the death of Henry.

I consulted with Dr. McPhaden, Mount Forest, and he agreed with me as to treatment.

(Sgd.) A. E. CLENDENAN.

From the evidence submitted showing the extreme fatality of the disease, five cases out of eight having terminated in death, and the three survivors having had paralysis of the throat with regurgitation through the nostrils, when they attempted to swallow liquids; the contagiousness of the disease, it having spread from the patient first attacked, the young man William McLuhan, to his brothers and sisters, there is strong reason to think the disease in question was diphtheria. It is quite true that membranous croup is an extremely fatal disease; but it is "everywhere a rare disease, excluding, it will be borne in mind, its occurrence as a complication of diphtheria." (Flint, p. 298, V. Edition.)

The season of the year when the disease prevailed, July, and the absence of measles or scarlatina, in which membranous croup, sometimes occurs as a complication, negatives the diagnosis of membranous croup. A bacteriological examination of a culture made from the secretions of the throat, taken from one of the survivors, might have been made by your bacteriologist, but as over one month had elapsed since the convalescent patient had taken the disease, it was not thought advisable to make the attempt.

Country physicians are often at a loss as to what opinion should be expressed in doubtful cases of throat disease, with exudation in the fauces, or pharynx, and particularly when laryngeal symptoms are present. The difficulty is to pronounce on the causation of the disease with which they are confronted. In many cases of tonsillitis, (follicular) very little treatment is required and isolation is but temporarily necessary. Then again, treatment would vary little, no matter whether the disease should prove to be membranous croup or diphtheritic laryngitis; for either disease shows an enormous mortality. This certainly has been true up to the present, but antitoxin seems to have been recently very beneficial in diphtheria. It is true that your Board offers facilities through the bacteriological laboratory in discriminating between diphtherla and other forms of throat disease. At least twenty-four hours would however elapse before the practitioner would be in a position to decide positively as to the nature of the disease. In the meantime he would have to admit that he could not diagnose the disease, or in order to be perfectly safe, would have to pronounce the case diphtheria, and act accordingly, on insufficient evidence.

Such situations are puzzling to a physician, who has to earn his livelihood, and who, while willing and anxious to comply with the law of notification, is not willing by his own action to acknowledge his insufficiency in diagnosis, and perhaps by this very confession of weakness open the way to a rival in practice, who may also be the medical health officer of the municipality.

In the opinion of your Committee, the most that can be expected of the practitioner in doubtful cases of membranous croup and in all suspected cases of diphtheria, is to report immediately to the Local Board of Health, or to the medical health officer. The onus of clearing up the causation of these obscure cases, should then rest on the Local Board or its executive officer.

It would be the duty of the local board to procure the necessary evidence, (bacteriological) if required, as soon as possible in the public interest, acting in the meantime as if the suspected case of diphtheria, were really that disease.

It would also be well that section 3 of the Regulations *re* Diphtheria, should be amended by inserting after the word "diphtheria" in the second line, the words "or membranous croup."

A circular might also be issued to all practitioners in Ontario, warning them, that by not notifying these cases of suspected diphtheria to the local board of health, they assume a responsibility, which properly belongs to the

municipal health department, and leave themselves open to a serious charge of neglect of professional duty, and of violation of the Public Health Act. The diphtheria regulations should be sent annually to every physician and Local board of health in Ontario.

All of which is respectfully submitted,

(Sgd.) J. D. MACDONALD,
J. J. CASSIDY.

REPORT ON THE PROPOSED WATER SUPPLY OF PORT HOPE

By the Committee on Water Supplies.

Toronto, May 14th, 1895.

To the Chairman and Members of the Provincial Board of Health of Ontario:

Gentlemen,—Your committee as per instructions contained in a resolution of the Board dated January 19th, 1895, proceeded to Port Hope on May 2nd as per appointment, and met the Medical Health Officer and the Sewer Committee of the council.

The examination of the lake front and the various points of importance in considering the propriety of placing the intake pipe in the lake at the point proposed in the plans was proceeded with and subsequently other possible sources of supply were examined.

In order that the Board may have some idea of the problem before it, the general topography of the town of Port Hope may be given.

The town is situated principally on two hillsides, each sloping towards Smith's creek, which runs from the north into Lake Ontario. The soil is a clay overlying the rock which crops out in the river bottom and at points along the banks of Smith's creek. Thus the lower levels of the town are either rock or clay, while the higher grounds are alternately sands and clay at different levels. Thus sometimes water is obtained at a few feet by digging, while in other cases the wells approach one hundred feet deep. To the north on the west side of Smith's creek the ground dips northerly towards a ravine where flows a creek running easterly, forming a small trout pond. At other points northerly, springs flow out forming three considerable streams, the principal being that supplying Winslow's brewery with a daily flow of about 20,000 gallons. These springs on the hillsides are at the level where the higher sands and gravels met the underlying clay. A similar stratification occurs on the east side of the town with at least one considerable creek flowing westerly to Smith's creek.

As the whole country rises to the north till the height of the Oak Ridges is reached, it may be expected as is the case, that Smith's creek is a considerable stream rising near Kendall, and fed by numerous springs along its route in its rapid descent to the lake. The stream owing to its rapid fall is largely utilized for milling purposes, there being five dams on the streams within the town limits. Naturally on this account the amount falling over the last dam is lessened, but at the time of inspection it had a definite current until the new basin was reached owing to the present low lake level.

From the general outline it will be gathered that there are three possible sources of water supply for the town.

1. The lake (Ontario).

2. Smith's creek above the town.

3. The springs to the north of the town, yielding probably from those in sight with the town limits some 50,000 or 60,000 gallons daily without development.

Referring to these in reverse order, it may be said that with a little care there seems no doubt but that a supply of splendid underground spring water sufficient for all purposes for years to come could be obtained at the points indicated.

As regards the second source of supply, if a pipe were carried up Smith's creek some three-quarters of a mile northward from the last dam, forming Corbett's pond and above the slack water, there would be obtained good spring water subject only to the usual polluting agencies of streams flowing through an agricultural country, with the occasional turbidity common to all streams having clay banks and the additional unpleasantness of being warmer than either of the other sources for a short time in summer. In addition to this it would probably be found that the water main leading from the intake to the stand-pipe would be more expensive in this than in either of the other cases.

The lake supply being the only one which is presented to the Board for approval in the plans submitted, may be briefly described as being a plan for supplying Lake Ontario water by a pipe laid out into some twelve feet of water at a point some 1,150 feet from the shore in a southwesterly direction and to the west of the pier from 1,500 to 2,000 feet from the point at which Smith's creek waters meet those of the lake through the basin at a point some 1,400 feet from the shore line. The proposition is to place the pump-house on the shore opposite this on Smith street inside the foreshore which consists of a beautiful coarse-grained sand beach used as the chief supply of building sand for the town.

The analysis of the water as given below will be found to be that characteristic of Lake Ontario generally, and the supply if maintained in its state of purity will be all that is desired. The objections to placing the pipe at this point are that owing to its being so short a distance from shore the water will be turbid with every storm that beats on the shore, and to the proximity of the outlet of Smith's creek to the intake pipe. That this latter may become serious may be argued from the fact that the intake pipe will be directly in a line toward which an east wind would blow the waters from the creek without any time being given for great diffusion.

Remembering that Port Hope is a town of some 4,800, that Smith's creek is the natural outlet for all existing and future sewage of the town, and that there are already the following sources of pollution, it will be seen that the matter is one of great importance in the consideration of the present and future disposal of the town's sewage. These sources of pollution are (*a*) Tannery; (*b*) A number of privies; (*c*) Queen's hotel and houses connecting with Walton street sewer; (*d*) Drain from post office; (*e*) Town Hall sewer with water-closets; (*f*) Drain from brewery.

The intention is to at once extend the existing sewer up Main street.

Your committee after fully considering the situation is of the opinion that in view of the certainty of present and of future increasing pollution of Smith's

creek, the proposed point of intake ought not to be approved of by the Board, if the best interests of the public are to be considered, since sooner or later the water supply will become dangerously polluted.

There are, however, two modifications of the plan, either one of which, notably the second, will give to the town a public water of undoubted purity.

1. The extension of the water-pipe farther westward and out several thousand feet into deeper water.

2 The sinking of a well into the sand beach of such a size as will enable a day's supply to be pumped to the stand-pipe, the well filling up continually.

By this simple method, adopted in various places, the water supply will always be obtained free from turbidity, while by filtration the dangers of sewage pollution will be completely removed.

Incidentally it may be remarked that there would seem to be a notable saving in the outlay on the 1,600 feet of 16-inch pipe proposed to be laid into the lake.

A preliminary objection has been raised that the town is already committed to the scheme of laying the intake out into the lake; but as the town council was notified of the law in the matter on the 30th of July, 1894, and the contractor who has undertaken the work was fully aware at the time he made the contract of the provisions of the Act, your Committee can see no reason why the Board should in any way modify its views on a sanitary question under such circumstances.

From the following will be seen the correspondence between the authorities of Port Hope and the Secretary of this Board:

TORONTO, July 30th, 1894.

DEAR SIR,—I notice by to-day's papers that Port Hope is contemplating a new public water supply. In this connection I respectfully draw your attention to section 30 of the Public Health Act, and request you to notify the council and local board of health of the provisions of this section.

I have the honor to be,
Your obedient servant,

PETER H. BRYCE,
Secretary.

H. V. SANDERS, Esquire,
Town Clerk,
Port Hope.

TORONTO, November 23rd, 1894.

DEAR DOCTOR,—I learn from newspaper reports that your town intends introducing a supply of public water for drinking purposes. I beg to call your attention to section 30 of the Public Health Act and ask you that you will promptly bring this matter to the attention of the Local Board of Health and town council. I may say that I wrote a letter similar to this asking for information, to the town clerk, but have not received the courtesy of a reply from him.

Before the work can be legally executed this Board will require to make analyses of the water, as well as to have a sketch map of the point of supply and a statement from yourself as to the possibility of the water supply to contamination from surrounding sources. In order to facilitate your work in this matter I forward you a letter of instructions with regard to taking samples of water.

With kind regards,

I remain,

Yours very truly,

PETER H. BRYCE,
Secretary.

L. B. POWERS, Esquire, M.D.,
Port Hope, Ontario.

PORT HOPE, Dec. 21st, 1896.

DEAR DOCTOR,—You will find enclosed the certificates *re* waterworks. Mr. Stewart, the engineer, of Toronto, will send over to your office a plan of the harbor and showing the exact locality that the water was taken from. I hope the samples arrived all right. Was sorry to send on Friday, but we have had so much delay, and it is very difficult to go out and get water at this season. To-day being a fine day, thought might possibly wait for a week to get out.

Please let me know anything you would suggest and try and give result of water soon.

Yours faithfully,

L. B. POWERS.

TORONTO, Dec. 27th, 1894.

DEAR DOCTOR,—I have got yours of the 21st and have noted the contents. I shall expect to hear from the engineer regarding the plans.

It is a matter of much importance to know whether the river wash will in the future be likely to affect the water at your point of intake, as at present there must be more or less sewage contamination of the stream, and this must tend to increase rather than diminish.

The whole matter will be reported to the Board at its next quarterly meeting, so that it will be well to have the plans and specifications completed very shortly.

With the season's compliments,

I am, yours faithfully,

PETER H. BRYCE,
Secretary.

L. B. POWERS, Esquire, M.D.,
Medical Health Officer, Port Hope.

The committee delayed acting on the instructions of the Board, contained in the following resolution, passed January 19th, 1895, until the spring weather would enable them to make a satisfactory investigation of the various possible sources of supply.

Moved by Dr. Vaux, seconded by Dr. Rae, "That the plans of the proposed waterworks system of Port Hope be referred for further consideration and report to the Standing Committee." Carried.

Your committee would therefore in conclusion recommend that, until the plan of sinking a well in the sand has proved impracticable, the Board approve of this amendment of the plans submitted to it for approval; and that should it at any time in the future be found necessary to extend the pipe into the lake, owing to the increasing consumption of water by the town, the town shall then extend the pipe to such a point as experience shall prove to be free from the danger of sewage pollution, as already indicated, and as shall conform to the views of your Board in this particular. The freedom from objection to the use of Smith's creek for sewage disposal, should the water be pumped from a well in the sand beach, as recommended, ought to be the strongest of reasons for the council modifying the method of obtaining the town's water supply as indicated in the committee's recommendations.

All of which is respectfully submitted

HARRY E. VAUX,
PETER H. BRYCE,
Committee.

THE REPORT OF THE COMMITTEE ON PUBLIC WATER SUPPLIES ON THE INVESTIGATION OF THE THAMES WATER AS A SOURCE OF SUPPLY FOR THE CITY OF CHATHAM.

To the Chairman and Members of the Provincial Board of Health of Ontario:

TORONTO, May 29th, 1895.

GENTLEMEN,—Your committee on water supplies begs leave to report that as per instructions contained in the resolution of the Board adopted at its meeting on the 17th of May, it continued the investigation of the Thames water, proposed as an adjunct supply of public water for the city of Chatham, and that it instructed Mr. J. J. Mackenzie to proceed to Chatham and make a series of analyses of the filtered water, which was carried on from May 22nd to May 25th inclusive.

Your committee being supplied with the results of these analysis proceeded to Chatham on May 28th and made a detailed analysis of the works of the Chatham Waterworks Company with the following results:

1. That the Chatham Waterworks Company was supplying water from the subterranean wells in Raleigh by a pump at a depth of seventy feet by continuous pumping for twenty-four hours, a daily water supply, amounting the day of our visit to 164,824 gallons from a new well sunk to the rock in October, 1893.

That the original well which had supplied some 300,000 gallons in twenty-four hours had become clogged with clay and was useless, being simply a sink hole for surface water and although within a few feet of the new well, was wholly unaffected by the pumping from it. Further, your committee found two other wells which had been bored on the two acres of the property of the company and had been connected with the pumping well, but which had not, your committee was informed, materially increased the supply obtained from the first well. It may be stated, therefore, that supplying at the pumping station in Raleigh Township a pressure of forty pounds to the square inch, the company were unable to supply more than 164,824 gallons per diem.

After the experience of four years, and after the efforts above indicated, the company found it necessary in keeping with the increasing demand for water and the decreasing amount available from this subterranean source, to seek for an additional supply to supplant that from Raleigh.

After consideration, the company decided in the beginning of 1895 to filter the Thames water by the Hyatt filter, or what is now known as the filter of the New York Filter Company.

Notifying this Board through its secretary of the changed conditions in March last, and of its decision, the company requested that the Board investigate the results of their new operation, as by the terms of its agreement with the town of Chatham the decision as to the quality of the water was left with the Provincial Board of Health. Your secretary suggested that in order that some accurate idea of the river as a source of supply might be obtained, a series of analyses of the river water for some weeks under different seasonal conditions be made, in order that comparative results with the water after filtration might be obtained.

The results of the analysis made by Mr. J. J. Mackenzie, the analyst of the Board, are herewith submitted.

Briefly summed up, these analysis show:

1. That the river in flood time in March contains, as all rivers and the shores even of the great lakes, increased amounts of organic matter, principally from the washing down of vegetable matters by creeks, etc., as well as from cultivated fields and other sources of impurity along the banks, whether vegetable or animal.

2. That with the incoming of spring and the growth of vegetation with pleasant weather, the condition of the stream, both from the chemical and bacteriological standpoint steadily improved, until during the last month the river water has shown but a moderate turbidity, common to all streams with clay banks, and the chemical analysis showing water by Wanklyn's standard, well within the second class; while the bacteria present were reduced to a number, for a river water, infinitely purer than many of the streams which in Europe or the United States are constantly utilized—even unfiltered—for town purposes. The comparison with different foreign cities, and Toronto lake water are given in the accompanying tables.

The results, chemically, of removing suspended organic matters from the river water by alum precipitation are likewise given in the tables, in order that the amount of dissolved albumenoid ammonia in the water might be shown. The chlorine present in the most turbid samples is seen to be as low as Lake Huron, and to be lower than that commonly present in a normal river water as the result in the sample taken the first of May shows.

With such conditions, the effects of filtration both from the chemical and bacteriological standpoint may now be clearly compared.

Sample No. 1, filtered, shows the chemical analysis of the water taken on May 27th, after filtration, to be in every respect first-class, except in albuminoid ammonia, which is higher than in that precipitated with alum in the laboratory.

Assuming, however, that the river after a week of dry weather, as between May 21st and 28th, was in normal condition chemically, that is, that the suspended organic impurities from storm wash would have had time to settle, the chief value of any examination would be to determine what proportion of bacteria would be removed by filtration from a river water in its normal condition. The tables contained in the appended report of Mr. Mackenzie give the exact results of the work of the filters under varying conditions.

From these results, speaking generally, the filters, when doing work under normal filtering conditions, removed from eighty to eighty-five per cent. of all the bacteria present in the unfiltered water. The number of bacteria left after filtration as compared with many samples of water, both unfiltered and filtered, in different cities, may be seen in appended tables. Briefly, it may be stated that they approach in numbers the minimum fixed by Professor Koch, of Berlin, for a safe water even in such streams as the Spree at Berlin, and at Altona, where very large amounts of sewage enter the stream—that at Altona receiving from the whole city of Hamburg.

As, however, the maximum filtering power of the same class of filters at St. Thomas has not yet been reached at the Chatham station, it may fairly be expected that, when the superintendent has had more experience in the management of the filters, an improvement in this particular will be obtained.

Such, then, briefly outlined, are the main facts connected with the investigation.

While the members of the board have been able to draw individual conclusions from the facts as given above, it may be well that your committee sums up the situation as it appears to it, as affecting the question of health in the matter of using Thames water as a domestic supply.

1. The first point is that of the quality of the Thames water at Chatham, *per se*. The river, as other streams, depends for its supply on springs, either along its banks or in creeks flowing into it, or upon the rainfall on its surface and neighboring fields. This is true, of course, of even the great lakes, and is only a matter of degree as to the proportion from any single source.

2. The pollution of the stream must come along with these several sources of supply, and hence we have cities and towns on its banks, farm-yards and cultivated fields to consider.

Of the first is the City of London, some sixty or more miles away. The sewage of London is largely ponded by the dam below that city, but there is no evidence elsewhere to show that pollution at this distance has been such as to affect a public water supply.

An inspection of the river for five miles above the town shows that a number of farm-yards are situated near the river banks, and that barnyard washings are likely, with heavy rains, when the ground is frozen in spring, to pollute the stream. That the amount of this is at present chemically inappreciable is shown by the extremely low amount of chlorine in the time of flood in March, it (chlorine) being the most delicate test for animal pollution.

As regards vegetable organic matter washed from the banks, etc., while this will be excessive in the spring floods, there seems no evidence to show that it at that time of year is dangerous to health.

3. In one case near the town is a slaughter-house, a source of danger of a serious nature, if it be found to be allowing decomposing animal matter to pass into the river.

4. The possible pollution of the river at the point of intake by the current of the stream, which receives the town sewage of Chatham, flowing upward past the intake at times when the lake water may be higher than the river, must be considered, until proven otherwise, to be a possible source of pollution.

Considering these several points, and what may be done to remove any possible dangers of a polluted supply, your Committee would recommend:

1. That the powers of the Public Health Act and of the Waterworks Act be taken advantage of to prevent avoidable pollution of the stream for a number of miles above the city.

2. That a series of levels be taken to accurately gauge the rise of water in Lake St Clair, and its effect on the current of the river in Chatham, in order that, if necessary, the intake pipe may be carried to a point in the stream above all danger of pollution from Chatham sewage.

3. That the method of operating the filters so as to obtain the highest degree of filtration be carefully governed by the facts obtained from the bacteriological tests made by Mr. Mackenzie, and such further results as scientific investigation may in the future prove to be practicable.

4. That the City of Chatham is hereby advised that it is the opinion of the Provincial Board of Health that the Thames water may be safely used as a public water supply, judging from the results which have been obtained in the investigations above recorded, and so long as the recommendations made in this report are rigidly followed out—assuming the continuance of the present extent of riparian population along the stream above Chatham.

All of which is respectfully submitted.

HARRY E. VAUX,
Chairman.

PETER H. BRYCE,
J. D. MACDONALD, Committee.

(Letter to Local Board of Health, Chatham.)

TORONTO, January 6th, 1896.

DEAR DOCTOR,—I beg to enclose herewith the bacteriological analysis of the Chatham water supply made by Mr. Mackenzie on December 26th, 1895, also examination made of the St. Thomas water supply.

I regret to find that the examination of the Chatham water supply shows that the work of filtration at the time of making the test was not more satisfactory. There is no doubt but that the condition of the river at the time, in the matter of clay in the water, caused the filter to be overworked in order to supply the amount of water required for the city. The rapid increase of sand resistance within a few hours from three to four pounds to fifteen or sixteen

pounds amply illustrates the point. The possible efficiency of the filter is illustrated by the test of the St. Thomas water, which shows in the unfiltered river water before ponding for sedimentation, practically the same amount of bacteria.

I beg to call your attention and that of your council to clause three (3) of the report adopted by this board in June last, in the matter of filtering the water, which I quote:

"That the method of operating the filters so as to obtain the highest degree of filtration, be carefully governed by the facts obtained from the bacteriological tests made by Mr. Mackenzie, and such further results as scientific investigation may in the future prove to be practicable."

What seems urgently demanded is more filters, and such may be materially assisted by ponding the river water, to allow of a sedimentation of the clay, and along therewith a notable number of the bacteria present.

This is well illustrated in the case of the St. Thomas water.

Trusting that additional filters may be shortly added to the plant,

I remain,

Yours very sincerely,

W. R. HALL, ESQ., M.D.,
M. H. O., Chatham, Ont.

(Sgd.) PETER H. BRYCE,
Secretary.

Bacteriological Examination and Tests of the New York Filter at Chatham.

No.	Date.	Hour.	Rate of pumping per diem in gals.	Alum.	Sand resistance.	Bacteria per c. c. before filtration.	Bacteria per c. c. after filtration.	Per cent. of reduction.	Cleaning of filter.
1..	May 22.	11 a.m ...	432,000	0.72 grs per gal.	5 lbs.	2,385	....	.....	Filter cleaned May 21st, 10 a.m.
2..	May 22.	11 a.m ...	432,000	0.72 " .	5 " .	.....	479	80	
3..	May 22.	11.30 a.m.	432,000	0.72 " .	5 " .	.....	1,567	34.3	Filter cleaned between 11 and 11.30.
4..	May 22.	12 noon ..	432,000	0 72 " .	5 " .	.....	890	62.7	
5..	May 22.	12 noon ..	432,000	0.72 " .	5 " .	.....	630	73 6	
6..	May 22.	1 p.m	432,000	0.72 " .	5 " .	...	550	77.8	
11..	May 23.	3 p.m	432,000	0.72 " .	5 " .	1,200	.....	....	
10..	May 23.	3 p.m	432,000	0.72 " .	5 " .	.....	188	84.4	
12..	May 23.	3.30 p.m..	832,000	1.18 " .	5 " .	.....	900	25.	Filter cleaned between 3 and 3.30.
13.	May 23.	4 p.m	832,000	1.18 " .	5 " .	.....	260	78.4	
14..	May 23.	4.30 p.m..	832,000	1.18 " .	5 " .	.....	176	85.4	
16..	May 24.	2.30 p.m..	832,000	1.18 " .	5 " .	950	..	.....	
17..	May 24.	2.35 p.m..	832,000	1.18 " .	5 " .	.....	164	82.8	
18..	May 24.	4.20 p.m..	400,000	No alum	5 " .	.....	475	55.8	Filter cleaned about 3 p.m.
19..	May 25	9.45 a.m..	400,000	2 grs. to gal ..	... ...	1,100	.....	.....	
20..	May 25.	9.45 a.m..	400,000	2 " ..	.....	.....	160	85.5	
21..	May 25.	12.25 p.m.	400,000	2 " ..	.....	.....	259	77.3	Filter cleaned about 10 a.m.

Results of Bacteriological Analyses of Thames River. (Unfiltered).

Date.	No.	Bacteria per c. c.
March 29th	3	9,635
March 29th	4	10,570
April 16th	7	9,163
April 16th	8	9,720
April 23rd	10	137,175
April 23rd	11	4,550
May 2nd	13	2,340
May 2nd	14	2,625
May 20th	17	1,284
May 20th	18	1,680

Results of Chemical Analyses of Thames River.

Date.	Appearance		Free ammonia.	Albumenoid ammonia and nitrates.	Nitrogen as nitrates.	Chlorine.	Solids at 700.6.
	Before precipitation.	After precipitation.					
March 30	Muddy	Clear	0.28	0.44 after precipitation 0.132	0.266	2.0	5,960
March 30	Muddy	Clear	0 295	0.438 after precipitation 0.130	0.286	2.0	
April 5	Muddy	Clear	0.1564	0.340 after precipitation 0.135	1.02	2.0	
April 5	Muddy	Clear	0.16	0.139 after precipitation 0.14	1.00	2.0	470
April 17	Very turbid	Clear	0.118	0.3906 after precipitation 0.140	1.344	3.0	367
April 23	Slight turbidity		0.028	0.22	1.58	4.0	310
May 1	Slight turbidity		0.014	0.34	0.227	4 0	
May 28	Clear		0.023	0.24		5.0	Filtered water.

No.	Date.	Locality.	Bacteria per c. c.	
7	May 22	Raleigh well, just as it issues from the well.	150	
8	May 23	Lake Erie, 2 miles out from Rondeau harbor, surface.	60	Wind southerly.
9	May 23	Lake Erie, 2 miles out from Rondeau harbor, 30 ft. below surface.	137	
15	May 23	Water from wells into which filtered water is pumped.	850	

(Analyses by J. J. Mackenzie, B.A.)

Results of Tests of Hyatt Filter, St. Thomas.

Date.	Bacteria per c. c. before filtration.	Bacteria per c. c. after filtration.	Filters cleaned.
October 23rd, 1891..	1,240	44	No. 1, 10 hours before. No. 2, 5 hours before.
October 24th, 1891..	1.380	No. 1 filter, 59 No. 2 filter, 270 Both filters, 70	Cleaned 10 hours before. Cleaned just before taking sample.
October 26th, 1891..	1,545	50	Cleaned as in first case.

Monthly Averages of Weekly Examination of Toronto Water. (Lake Ontario.)

March, 1894	5,172	(From city tap.)
April, 1894	2,353	(Analyses of Mr. Shuttleworth.)
May, 1894	1,172	

Frankland's Experiments. (London, Eng.)

Material, six inches in depth.	Bacteria per c. c. before filtration.	Bacteria per c. c. after filtration.	Rate per square ft. per hour.
Ferruginous green sand	Initial, 80		
	After 13 days, 8,000	1,000	.73 gal.
	After 30 days, 1,280	780	1.14 "
Iron sponge	Initial, 80		
	After 12 days, 2,800		0.40 gal.
	After 30 days, 1,280	2	0.45 "

(Analyses from Massachusetts State Board of Health Report, 1893.)

Monthly Averages of Bacterial Results showing Normal Efficiency of Lawrence (this is where filter beds of sand and gravel are used for filtering water) City Filter.

Month.	Bacteria per c. c.		Per cent. of No. of river bacteria which appeared in effluent.
	River.	Effluent.	
1893.			
October	8,700	130	1.50
November	7,200	177	2.46
December	9,700	141	1.45
1894.			
January	7,300	140	1.92
February	8,000	125	1.56
March	7,100	100	1.41
April	14,700	232	1.58
Average	9,000	150	1.67

Extent of filter 2.5 acres, normal rate of filtration 2,000,000 gallons per acre in 24 hours.

REPORT ON THE PROPOSED WATER SUPPLY FOR THE TOWN OF ORANGEVILLE.

TORONTO, June 2nd, 1896.

To the Chairman and Members of the Provincial Board of Health of Ontario:

GENTLEMEN,—Acting under the resolution adopted at the special meeting of the Board on May 17th, I visited Orangeville on May 22nd owing to the fact that being on a visit of inspection to Orillia regarding scarlatina and diphtheria prevalent there during several previous months, I found it possible to save time by going to Orangeville in the same trip.

Arriving there I met the Mayor and several members of the town council, and with them proceeded to inspect the several sources proposed as possible supplies of public water for the town.

The first visited was the Ryan, a spring about one and one-half miles from the town, to the north of the Mono and Garafraxa road. Its volume was estimated at 60,000 gallons daily, but its situation was in low ground, not many yards below where the farmyard drained toward the ravine in which it rises.

The second spring was as seen in the rough sketch herewith submitted, the Perfect spring, rising in a shallow valley and gathering up from springy land below and from another valley into a very considerable stream. Its estimated flow on a line with the eastern boundary of the cemetery was 100,000 gallons, but a considerable increase is doubtless possible by developing other springs in the wet land. Of course there would be a considerable amount of organic matter present in that from the bog-land, but as the analyses show, the sample taken where the spring appears above is splendid water. It lies to the south of the cemetery some 500 or 600 feet with cultivated land between, and is probably twenty-five feet lower than the surrounding ground.

The third series of springs are what are called the cemetery springs and rise in the valley, as seen in the sketch, to the north of the cemetery. There are three or more springs flowing out of the bank to the south and the main one in the valley farther west. As suggested at the last meeting, the committee had had the *debris* removed, and all of these were discharging a limited water from the limestone sands and gravels which here as everywhere in the district overlie the blue clay.

These springs feed the creek which as increased near the side-line has an estimated flow of 160,000 gallons per diem. The level is some thirty feet below that of the cemetery high ground to the south, and the upper spring is rather over 100 yards from the nearest grave to the south. The north portion of the cemetery has not many graves, and there is a strip of land along the whole north side of the cemetery grounds which has not been utilized at all.

The fourth spring visited was on the east side of the side-line in another valley rather farther north. The ground around is wooded and a fine flow of water from several springs is seen, these collecting into another creek flowing through the town. Other springs, as the Montgomery spring, rise in the area between the side-line north and that to the east, the whole of them creating a body of water which may, as the town grows, be readily collected and will form one of the finest possible sources of public water in the Province, if guarded gainst pollution.

The chief attention of the local committee and your Secretary was devoted to the spring in the valley lying north of the cemetery, since it rising farthest west has a height greater than any other, being, I was informed, thirty feet higher than the highest point of the town.

What is at once noticeable in the location of all these springs is that they rise to the west and northwest of the town under the superficial sand and gravels which everywhere overlie the clays or rocks of the central plateau of the Province.

At this point they all have an easterly trend, those to the north following northerly toward Georgian bay, while the others, all of those examined, flow southeasterly through the town. It is thus evident that these underlying clays have a southerly dip. It is a point of much importance as indicating the direction in which it may be in the future found necessary to develop the local supplies. The gathering ground of each, while locally limited by other ravines, is altogether northwesterly to the still higher grounds of the plateau.

The general location described, the character of the ravine to the north of the cemetery may be more exactly described.

As seen by the diagram, its general direction is northwesterly, *i. e.*, away from the cemetery, being at the westerly line of the latter, probably some twenty rods distant.

The valley beyond the westerly spring has much interest, it being quite dry for probably twenty rods, the bottom being overgrown with sod. As, however, the valley grows shallower westward, spring ground is seen in two hillsides, each of which indicate the level of the clay beneath the sand and gravel. This, with the dry character of the valley down to the first spring, indicates that the valley has under the sod a porous soil of sand and gravel mixed with humus brought down by successive spring and autumn rains, overlying the blue clay, at the top of which the springs appear. This black mold is visible in the westerly spring where cleaned out, and accounts for the higher albuminoid ammonia present in this than in the other samples.

The amount of water in sight in the valley at present seems ample for present needs, but the direction of the valley away from the cemetery, and the advisability of gathering the water in such a manner as to prevent possibility of contamination would seem to indicate the desirability of making a series of test-pits up the valley, and after determining the presence of water in the hard pan up the valley to catch it by a series of field tiles or perforated pipes and collect it in a well near the westerly spring, thereby securing absolute freedom from surface pollution and maintaining it at the low temperature of the ground throughout the year, in a manner similar to that practiced at Brantford.

The analyses, the distance from and the sparseness of the graves, as well as the now known absence of danger from cemeteries, except under the crowded conditions of large cemeteries in the cities of the older countries, seem to dispose at once of any possibility of danger from the location of the cemetery; but in order to prevent even the possibility of future danger, it will be advisable that the Board recommend that the area of the cemetery along the north be set apart for pasturage or other similar purpose and burial therein prevented.

It is further recommended that while the source of supply be approved of, it be on the condition that the provisions of the plans be such as to insure freedom from local and surface pollution.

The plans when completed by the engineer will subsequently, under the clause of the Act, be submitted to the Board for approval.

All of which is respectfully submitted,

HARRY E. VAUX, Chairman.
PETER H. BRYCE, Secretary.

REPORT ON GALT SEWERAGE SYSTEM.

By the Committee on Sewerage.

Toronto, May 14th, 1895.

To the Chairman and Members of the Provincial Board of Health of Ontario:

Gentlemen,—Your Committee having made arrangements with the committee on sewerage of the town council of Galt and with the Medical Health Officer, visited Galt on May 10th and made a survey of the topography of the town in company of the above committee, the Mayor, and Mr. Chipman, the engineer in charge.

From the full and very complete report prepared by the engineer, it was easy to follow the details of the proposed plan and to obtain an accurate idea of the various problems involved in carrying out to a successful issue the proposed system.

Your Committee devoted its attention specially to the question of the urgent necessity for a sewerage system, as indicated by the site of the town being principally on two hillsides inclining toward the Grand river, with an underlying fissured limestone rock cropping out of the east as high as the level of the floor of Mill Creek pond, and having a corresponding level on the west as seen in the excavation made for the aqueduct of the public water supply.

The consequence notably on the east side of the river of these inclined rock strata is that the subsoil rock contains water reaching practically to the surface in some places, cropping out here and there as springs in cellars of the town, and in the area lying below Mill Creek pond cellars even in August having water standing in them, in some instances several feet deep; this cellar water being, according to the statements of the local committee, worse since the blasting of the rock in the laying of the water pipes.

The other area especially demanding immediate sewerage is one which, in addition to the above cause of dampness, is affected during the spring floods and heavy freshets by the rise of the water in the river owing to the very shallow river bed at several points below the main bridge and dam; anchor ice may form in the spring and an ice jam may raise the water some fifteen feet in the river, holding it up for several days at a time. Connections at present made directly from cellars to the river's bank then necessarily result in flooding of cellars with sewage or whatever may be driven back or held up by the high water.

In many of the streets being closely built up the general use of public water and the progressive character of the population making them desire bath-rooms, water-closets and sinks, will rapidly create a demand and necessity for local sewers as soon as the main sewers have been constructed.

With the present population of 7,000 it may be fairly estimated that within ten years 5,000 people will be draining into the town sewerage system, and the Committee has had to consider that feature of the engineer's report dealing with the disposal of the sewage. The Committee wholly agrees with that portion of the report which proposes a main sewer on either bank for receiving all the laterals, and thus completely preventing the present unsightly pollution of the banks of the stream by some twenty-five privies, private drains, sewers from large factories, etc.

Those portions of the report detailing how the sewage can be pumped by small steam plants on either side, thus preventing the flooding of cellars in flood time, while providing for the raising of the sewage to whatever peint it may be found most advantageous to develop a sewage farm, are simple, scientific and will no doubt perform efficiently the work intended.

The report further very fully and exhaustively discusses the drainage areas of the river, the conditions of the river at different periods of the year, the dams which affect the distribution of the water, the various polluting agencies, and the probable amount of water at the time of minimum flow, which always happens in hot weather when local nuisance is likely to be greatest. The report points out that with a population of 7,000 such a point of pollution will not be reached for some years when a local nuisance observable to the senses may be caused.

If we estimate the amount of sewage at fifty gallons per head for 5,000 people, we have 250,000 per diem or less than thirty cubic feet of sewage per second; that is at the minimum flow given by the engineer, there would be one part of sewage to 200 parts of water.

It may, therefore, fairly be concluded that if, with the minimum flow, a pipe delivering sewage into the middle of the river will cause no nuisance perceptible to the senses, that in cooler weather and higher water no trouble from such a source is possible.

Your Committee has, however, further considered that portion of the report dealing with the disposition of sewage on a sewage farm.

From the estimate given it is very evident that in the comparatively small stream of the Grand the water is approaching very much nearer to a point at which it will be recognized as more polluted than any other of our rivers with which the Board has had to deal, excepting the Thames, immediately below London. Guelph, fifteen miles above, is preparing plans for sewerage; Fergus probably will some day have sewers; Berlin and Waterloo effluents, after purification more or less complete, reach the Grand; Hespeler and Preston factory wastes reach the river; while below Galt Paris is polluting the stream to some slight extent and Brantford to a much larger extent. We have to realize that in almost every case these manufacturing centres are growing while the stream is certainly lessening; and though infinitely pure as compared with the ordinary streams of English manufacturing centres, yet, with years, general use of the stream for sewerage may be expected to reach a point where its presence is perceptible.

Dealing with the immediate question of Galt sewage, it may be said that it will not, however, be present in the stream greater to any notable degree for several years than at present, for experience in Brantford and elsewhere has shown that house connections are not numerously made at first, owing to the idea that plumbing is costly. Inasmuch, however, as the impression likely to be made on any person along the stream below Galt, is that sewers are different from drains which have existed, your Committee followed the course of the river from Galt to Glen Morris, a course of six miles. It is a beautiful valley with the high lands sloping to the river bank, with outcrops of rocks here and there, and springs flowing from every hill-side. There is altogether a considerable area of bottom lands which would be temporarily covered in flood-time; and which might very easily become seeded with anthrax, if any polluted material of this kind came from tanneries or woollen mills. The tannery in Galt at present uses only Canadian hides, free from any dangers of this sort, and it is only certain foreign wools which seem to be dangerous, otherwise the flooding of the lands

will be a benefit, depositing thereon organic matter as a fertilizer, and we are not aware that any other insanitary results have ever come from such occasional deposits.

The abundance of springs everywhere would seem to supply abundant water, should any farmer fear for his cattle from the use of the stream; while nowhere is a house within this area situated conveniently for using the water even were it necessary.

With these facts before it, your Committee begs to make the following recommendations:

1. That the plans and details of the proposed sewerage system for the town of Galt, as set forth in the report of Mr. W. Chipman, the engineer in charge, be approved of, as being such as to meet the sanitary requirements of the town.

2. That from the facts therein set forth and from the Committee's own calculations, it would recommend that the engineer's recommendations with regard to the disposition of the sewage during the period of construction of the works, subject to the condition that the town council obtain the consent of the municipal authorities of North Dumfries, the municipality whose territory lies contiguous to the town on the south and through which the Grand river flows be adopted.

3. That the municipal council of the town of Galt shall require the disinfection of the effluent before discharge into the river of the sewage from any tannery or woollen mill in which South American, South African or Syrian hides or wools are used.

4. That the town council may discharge the sewage into the Grand river at the point indicated in the engineer's report, under the conditions set forth in the preceding clauses of these recommendations, and on the distinct understanding that it shall proceed to the completion of the system by the preparation and use of the sewage farm for the reception of the sewage, whenever the Provincial Board of Health, after investigation of any complaints, shall determine the same to be necessary in the interests of the public health.

All of which is respectfully submitted.

PETER H. BRYCE,
HARRY E. VAUX,
E. G. KITCHEN,
J. D. MACDONALD,
Committee.

REPORT OF COMMITTEE ON FOODS AND DRINKS, *re* INSPECTION OF CATTLE, MEAT AND MILK.

TORONTO, February 10th, 1896.

To the Chairman and Members of the Provincial Board of Health:

GENTLEMEN,—Your Committee on Foods and Drinks has had under consideration the question which was discussed very fully at the last annual meeting of the Executive Health Officers Association in Belleville in August, 1895, and at which a strong resolution was passed urging legislative action in the matter of the inspection of cattle and meat and milk intended for human food. The existing Public Health Act has in section 99 and the amendments thereto, given very extended powers to local boards of health to deal with the matter, and

includes the principal provisions which, from time to time, have been included in the Municipal Act giving power to municipal councils to pass by-laws regarding the inspection of foods.

1. *Legal Power to Inspect.*—In practise, however, the powers given to local boards have not been exercised to the extent which they might have or should have been; but this neglect has largely been due to the lack of means and of officers supplied to local boards by the various municipal councils. As has been frequently stated, this neglect applies equally to the other duties laid upon local boards, if we except the good work of many boards in restricting the spread of contagious diseases of the acute kind. There can be no doubt, however, that the important reason for the inaction has been that the inspection of both cattle, meat and milk, requires knowledge of a special kind, and facilities for making thorough inspections, which exist in our several municipalities, only to a very limited degree.

We learn that there were in Ontario in 1893:

Working oxen	5,254
Milch cows	803,598
Store cattle (over two years)	378,014
Young cattle	871,016

or a total cattle population of 2,067,882 in Ontario, and that there were in the same year 1,935,938 sheep and 1,012,022 hogs. We can see, in order that an oversight of 5,000,000 animals be undertaken, that this would mean the institution of measures of an extent which, with our accustomed methods, at present seems beyond the question of possibility—some might say of necessity. The farmer of ordinary intelligence must be supposed to have sufficient interest in the well-being of his stock to see that should disease of an acute contagious kind appear, active measures would be instituted to prevent a more or less complete loss of this source of wealth.

When we find, however, that of this total number of animals 461,501 cattle, 616,237 sheep and 976,358 hogs were sold, we must realize, inasmuch as all may practically be considered as having been sold for the supply of either meat or milk, that the condition of health of these animals at the time of slaughter must have an intimate relation to the health of those persons to whom they are supplied for food.

Of this total, we find that 107,224 cattle, 360,509 sheep (pigs not given) according to the Dominion Year Book, were sold for export, and that 8,190,434 pounds of meat, and 118,589,829 pounds of dairy products were sent to foreign countries The question, therefore, of the health of these animals becomes one of prime importance, equally from the commercial and public health standpoint. Assuming for the moment that the importing countries are likely, by their laws, to exercise a due supervision of the animals, carcases and meat and dairy products received by them, we may properly enquire what is the situation with regard to the meat and milk consumed by our own people.

Assuming the approximate correctness of the above returns, we may conclude that the balance of the animals sold were for the supply of meat and milk of our own people. It becomes a difficult matter for calculation as to how many of these were utilized in supplying milk to our non-rural population. We are enabled in some degree to calculate the total number from data, relating to the total animals necessary to supply a given number of customers. I find that in the enquiry into the milk supply of Brantford, the several public milkmen supplied 2,021 families, or 10,000 persons. On the basis of five quarts per animal

per diem and one quart per family, 400 cows would be required to supply the town with milk. On the basis of 807,000 of a non-rural population in our cities, towns and villages, we would require some 32,000 milch cows to supply the needs of the population, distributed throughout 478 municipalities. In supplying milk for the production of some 100,000,000 pounds of cheese, 343,372 cows were utilized, so that the balance of nearly 400,000 cows were either employed in the manufacture of butter or were exported. For consumption as meat, we find that since there were 461,001 cattle sold, there were probably slaughtered for home consumption some 300,000, allowing that Ontario exported sixty per cent. of the total of 107,224 sent from Canada in 1893. We thus see that the number of animals demanding inspection as directly employed in supplying human food in Ontario is very large indeed. We have seen that there are 478 rural municipalities, so that the inspection demanded would be some 600 cattle to every municipality, or some 650 cattle per 1,000 on a per capita basis of population.

2. *The Needs for Inspection.*—It is now two years since your Board had printed and distributed 10,000 copies of a very complete report, with the main facts up to that date known with regard to the causation, distribution and prevalence of tuberculosis both in men and animals. The conclusions and recommendations contained in that report regarding tuberculosis in cattle, summed up, were:

Inspection of cattle:

(*a*) At abattoirs, both of animals and carcases.

(*b*) Of cow byres, and of milk.

(*c*) Of cows by tuberculine test.

Isolation of infected animals:

(*a*) Separation of infected animals.

(*b*) Ventilation of stables.

(*c*) Food and water prevented from becoming infected.

(*d*) Disinfection of stables, utensils, etc.

Quarantine:

(*a*) Of all imported animals.

(*b*) Of all acute contagious diseases in native cattle.

Since that time the great importance of the subject, both from the commercial and sanitary point of view, has caused progressive governments both in Europe and America, to take steps, not only to obtain greater information regarding the disease, but to institute measures for the eradication of tuberculosis in cattle. Already (in 1896) France requires the tuberculine test to be applied to all cattle imported to that country.

Since the publication of that report in 1894 the results of systematic work have established still more firmly every position then taken.*

Amongst the most notable publications upon this subject to date are:

1st. The full reports of the congress for study of tuberculosis held in 1888-1893, in Paris, and an elaboration of Nocard's views, (Prof. in the Alfort Veterinary College, France), in a work on "The Animal Tuberculoses," brought up to date in 1895.

2nd. The conclusions of the Royal Commission on Tuberculosis, England, published early in 1895.

3rd. The published proceedings of the Massachusett's State Cattle Commission during 1894, and which are printed very fully in the report appearing in 1895.

At this time it would seem almost unnecessary to quote any statements from these various sources, were it not that there would seem to be a determined attempt on the part of certain persons and newspapers in Ontario, speaking in some cases with authority, to minimize the importance of this scientific work, by using the very arguments which in past years have in succession been used against the contagiousness of every disease, which we now accept without question. Within ten years physicians, as witnesses in courts of law in this Province, have asserted that scarlet fever and diphtheria were not contagious; and twenty-five years ago smallpox was treated in the wards of our general hospitals. With tuberculosis in cattle, the old argument is being used, "it has always been and we have gotten along with it, and since we are not all dead, let us rest and be thankful."

We know, however, that smallpox can be stamped out, and that commercially it pays a hundred times over to act promptly in the first case; and similarly it will soon be found that it pays to stamp out tuberculosis.*

The following truths, half-truths or actual mis-statements, selected from newspaper articles, illustrate what has been referred to.

Statement 1. The report of competent and skilled experts have shown beyond a doubt that there is in this country very little tuberculosis.

Statement 2. The Agricultural Department of the Dominion has taken every precaution to prevent the importation to Canada of cattle affected with any of these diseases.

Statement 3. Tuberculosis is not always infectious, while pleuro-pneumonia is both infectious and contagious.

Statement 4. Galtier of France, fed pigs with the raw flesh of tuberculous cows, but failed to infect them.

Statement 5. Nocard fed several litters of kittens with the raw flesh of tuberculous cows, but failed to infect them.

Statement 6. Peironcito of Naples, fed eighteen pigs during five months on the flesh of tuberculous cattle, but they did not become infected.

Statement 7. Peuch fed two pigs five days on milk drawn from the udder of a tuberculous cow, and slaughtered them fifty-six days afterwards, but no signs of tuberculosis were found

Statement 8. The eminent experimenters, Nocard, Bollinger and McFaydean, claim there is practically no danger in using milk from a tuberculous cow, so long as the udder is not involved, and the same is claimed by most American experimenters.

Statement 9. Prof. Law of Cornell, Ithaca, N. Y., carried on a series of experiments over a year ago, and came to the same conclusion.

Statement 10. Herschenger of Germany, inoculated rabbits in the abdominal cavity, even with the milk from tuberculous udders, and then only about forty-five per cent. contracted the disease.

Statement 11. In view of these facts we certainly believe that the Provincial Health authorities should go slowly in killing farmers' cattle as reported.

* Centralblatt, May, 1896.—Denmark, in April, 1893, passed an Act setting aside 50,000 crowns a year for five years for testing young cattle with tuberculin. It was not made compulsory, but the test was supplied free. Not much was attempted at first, but it became so popular that cows of all ages were soon being tested. By Oct., 1895, or in about two years, Prof. Bang reports having inspected 1,972 herds, containing 53,313. Of these 15% only of herds were found free from cases of tubercle. The work had become so popular, all asking for it, that the grant of 50,000 crowns has been increased to 100,000.

Statement 12. We are told by some that the only reliable means for detecting the disease is by subjecting each and every cow to the tuberculin test. These are the tests made at Warkworth, and it appears that our Ontario men of science seem more ready to accept this theory of inspection than those of foreign countries.

Statement 13. A note in "Hood's Dairyman" is quoted as saying, "that the Swiss Government has refused to enforce a by-law making the tuberculin test compulsory, since to use it greatly increases the danger to human life, by exciting latent tuberculosis into action, which would destroy the animal and render the milk dangerous for human consumption.

Statement 14. Prof. Nocard of the Veterinary School, considers tuberculin valuable as a diagnostic, but further says of it, its use is yet in the experimental stage.

Let us examine what are the facts in relation to each of these statements? With regard to the first we are not aware of any systematic inspection of cattle that has been made in any of the Provinces of the Dominion.

In the report of 1894, of the Dominion Department of Agriculture, Prof. D. McEachren, chief inspector, states regarding tuberculosis, "I regret to have to report that this disease continues to appear to be increasing among our herds, judging from the frequent reports and correspondence on the subject. I have pleasure in stating, however, that the percentage of affected herds in Canada is perhaps lower than in any other country, as is seen by the small number of cases met with during the examination of hundreds of lungs at the abattoirs and boucheries."

"It is as yet quite within the lines of possible extermination for a comparatively small outlay for inspectors, tuberculin and indemnity. I would strongly suggest that Parliament be asked to vote the money necessary to rid Canada of the plague, *worse by far than even contagious pleuro-pneumonia.*"

"I beg to report that all imported cattle are tested by tuberculin before being discharged from quarantine."

It is to be hoped that the conclusion of the chief inspector, that there is probably less tuberculosis in Canada than in any other country, is correct; but it is to be feared that the exact experiments made in the herds at different governmental farms will not bear out this opinion.

A statement in the report of the New York State Cattle Commission on tuberculosis in 1891, may perhaps be quoted here. "Tuberculosis in cattle, has been found to exist wherever examinations have been made. There are, of course, many herds entirely free from it, yet it has been found to exist oftentimes by our Commissioner where least expected."

In the report of the Dominion Department of Agriculture, Prof Saunders Director of Experimental Farms, states that after the tuberculin test and subsequent post-mortem examinations there were at the

Brandon Farm	28	animals		21	animals	proved tuberculous	75	per cent
Indian Head Farm	39	"	(3 not tested)	13	"	"	33	"
Nappan, N.S.	39	"		10	"	"	26	"
Agassiz, B.C.	18	"		5	"	"	28	"
	124			49			40	"

In *Statement 3* it is stated that tuberculosis is not always infectious. If by this we are to understand that in any animal, the disease from its beginning

until its termination, is not contagious in every stage, there is doubtless an element of truth in the statement, but Prof. Nocard's remark will cause us to best understand, the wisdom of making such a generalization. He says:

"Tuberculosis is the type of chronic diseases, its evolution is extremely slow and may last for years. It is found in animals which have exhibited no derangement of their general health, which have shown no falling off as regards fattening or the power of giving milk. *Sometimes, after remaining latent for a long time, the disease all at once exhibits paroxysms and more or less lasting exacerbations, which succeed one another at gradually lessening intervals, and end by exhausting the animal.*"

"Over-driving, prolonged lactation, foods of a bad quality, or some severe inter current malady, are the usual causes of these exacerbations."

Finally, "when the tuberculosis becomes general, the development of the disease is extremely rapid, galloping, so to speak, as in the acute phthisis of man. The fever is lighted up, never to be extinguished The animals sink visibly, and succumb in a few weeks, in a state of marasmus and exhaustion." "Death is the almost certain termination of bovine tuberculous." (Nocard 1895).

In *Statements 4 and 5*, we find that Galtier of France, Peroncito of Turin, and Prof. Nocard are said to have fed pigs and kittens with the raw flesh of tuberculous cows, and failed to infect them. Now in the work of Prof. Nocard (1895), these additional experiments are referred to as follows:

"Two pigs, five to six months old, were able to eat with impunity considerable quantities of condemned meat. Two kilogrammes on February 26th and 27th; three kilogrammes, on March 14th and 15th; three kilogrammes, on March 24th and 25th; and two kilogrammes, on March 27th and 28th. Thus these four animals, whose great receptivity is undoubted, both as to age and species, were able to eat repeatedly large quantities of tuberculous meat without any of them taking the disease." "This result is all the more impressive from the fact that two out of the fourteen samples of meat used for the experiments caused tuberculosis in rabbits where the juice was inoculated."

The explanation of these results is fully detailed in the report of the Royal Commission (England) 1895, appointed to "Enquire into the effect of food derived from tuberculous animals on human health."

It states, "we have now to point out the very great difference in one and another part of a tuberculous animal in the amount of tuberculous matter contained in the meat. This matter is found principally in the organs of the animals; as a rule, most abundantly in the lungs, lymphatic glands, serous membranes, but often in the liver, spleen, kidneys, intestines and other structures. These organs are usually removed by the butcher in 'dressing' the carcase, though some of them may, intentionally or not be left. To a practised eye, it is hardly possible that tuberculous matter in these organs can escape detection, and the importance of its presence there will soon be apparent."

"For, in the tissues which go to form the butcher's 'joint' the material of tubercle is not often found, even where the organs exhibit very advanced or generalized tuberculosis; indeed, in muscle and muscle juice, it is very seldom that bacilli are to be met with; perhaps they are somewhat more often to be discovered in bone, or in some small lymphatic gland imbedded in intermuscular fat. Yet there is always a difficulty in making sure of the absence of tuberculous matter from any part of a carcase that shows evidence of tubercle elsewhere."

"In Dr. Sydney Martin's experiments for the detection of tuberculous matter, three kinds of tests were employed; first, minute examination of the part for tubercle, with the aid of the microscope to discover tubercle bacilli; secondly, feeding susceptible animals, test animals, with suspected matter; and, thirdly, introducing into the bodies of test animals some of the suspected matter by way of inoculation, a more delicate test than the process of feeding.

"Applying these tests to the meat substance of twenty-one cows known to be tuberculous in one or another degree, he could not get visible evidence of tubercle except in two instances, and there it was of very small amount. He records the results of his other tests as follows:—'Of eight cows (mild tuberculosis), the meat of one gave positive results in one animal from inoculation, none by feeding. Of eight cows (moderate tuberculosis), the meat of three gave positive results in four animals from inoculation; none by feeding. Of five cows (generalized tuberculosis), four gave positive results either by inoculation or by feeding,' one only out of the four appearing to answer to both tests.

"The animals which have yielded affirmative results to his test of minute examination were not among the last five, and had given no result by feeding test animals with meat from their carcases, though meat from one of the two had, upon inoculation, responded to the test."

"Taking all the results together, the method of removal of the meat, the results of inoculation and of feeding, one is driven to the conclusion that when meat is infective, it commonly acquires its properties by being accidently contaminated with tuberculous material during its removal from the carcase. This conclusion, it is evident, is one of great practical importance, bearing directly on the question of the condemnation of the meat of tuberculous cattle for human consumption. And it is evident, also, that the infective properties of meat might vary with different series of experiments, *the result depends on the care taken in guarding against contamination more than on anything else. The conclusion arrived at in part explains the extremely divergent results obtained by previous observers.*"

"Having regard to Dr. Martin's invariable failure to produce tubercular disease by feeding (though he sometimes did succeed by inoculating) test animals with the meat taken by him from cows with mild or moderate tuberculosis, and admitting his explanation of an affirmative result, sometimes seen when meat was being taken from cattle with advanced or generalized tubercle, we are prepared to believe with him that, if sufficient discrimination and care were exercised in taking meat from tuberculous cattle, a great deal of meat from them might, without danger, be consumed by the community. *The practice of public abattoirs on the continent appears to be founded on the same belief.*"

Statement 7 is made that Peuch fed two pigs for five days with milk, and did not infect them. Dr. Woodhead (Royal Commission report), finds that guinea pigs succumbed to tuberculous milk, although it was heated to 80°C for ten minutes.

The report quotes Woodhead:—"It cannot be too strongly insisted on that so long as a single animal is affected with tuberculosis, on injection of the tubercular milk, so long must the milk be held to be dangerous."

The Commission's opinion is:—"And in view of the demonstrated dangers of milk from tuberculous udders, and the possibility of such dangers having to be encountered by human children, amongst other animals, we cannot hesitate to assent to Dr. Woodhead's doctrine."

Statement 8 and *9*, which is made, that the eminent experimenters Nocard, Bollinger and McFadygean claim there is practically no danger from a tuberculous cow, with no tubercle of the udder, is answered in the following statement:—"Dr. Martin (Royal Commission), had seventeen cows for experiment, fifteen judged tuberculous, two not tuberculous, and were so proved on post-mortem."

"Of the four cows in which the udder disease proved to be non-tubercular, two showed tuberculosis of the internal organs, and two showed no tuberculosis anywhere." "If reliance, therefor, be placed on the general condition of the cow, and on the physical examination of the udder, an accurate diagnosis of tubercular disease of the udder is not possible. Dr. Martin further writes:—'The milk of cows with tuberculosis of the udder possesses a virulence which can only be described as extraordinary.'"

"Dr. Woodhead again reports:—"A most important point is that the spread of tubercles in the udder goes on with most alarming rapidity. This I was able to observe in the cows constantly under observation."

The latest reports from prominent United States experts, such as those contained in the last report of the Massachusetts Board of Cattle Commissioners, printed in 1895, may be summed up in the following quotation:

"Tuberculosis is a contagious disease, and if an animal has one tubercle in it, who will say that the animal is not already contaminated? Experience has satisfied this Commission that there is but one course to pursue, and that is to destroy all of the animals in which tuberculosis is present regardless of the degree."

Statements 11, *12*, *13* and *14* bearing upon the value of tuberculin as a diagnostic agent, and the expression of opinion as to the scientific correctness of the opinion of this Board in advising taking any action on the results of the tuberculin test, may be dismissed with the following quotations:

Prof. Nocard, in his recent work, 1895, page 47, states:—"In all of the cases (except tuberculosis of respiratory tract), when tuberculosis is confined to the abdominal organs, to serous membranes, or to the glands of cavities, all these methods (already given for diagnosis) are inapplicable, and until lately the veterinary surgeon remained powerless. He could have suspicions, but had no means of acquiring certainty. It is not the same to-day, for we have in tuberculin a certain means of making the diagnosis of tuberculosis even when the signs are quite recent and limited."

In the Royal Commission, 1895 (England), Prof. McFaydean, a most conservative experimenter, says:—"I have no hesitation in saying that taking full account of its imperfections, tuberculin is the most valuable means of diagnosis in tuberculosis that we possess."

In the report of Commission on tuberculosis in cattle (New York, 1895), of which Prof. Law of Cornell University, Ithaca, N. Y., is a member, it is stated:—"As a means of diagnosis, tuberculin is so accurate that a competent veterinarian can now point out any diseased animal. This agent is sensitive when tuberculous processes are present, and the action following its use is practically certain; *and moreover this agent is perfectly harmless in non-tuberculous animals.*" "Prof. Law, a member of the Commission has experimented with it, and reports that no outward effects are produced by tuberculin in test cases, in cattle that are free from tuberculosis."

This same report, contrary to the statement attributed to Prof. Law in statement already given, says:—"Tuberculous cattle are valuable to the state

only when dead, and inspection and confiscation can never be detrimental to the interests of the honest dairyman, especially if liberal compensation were granted under well defined conditions."

The report of the Massachusetts Cattle Commissioners, Massachusetts, printed in 1895, says:—"If tuberculin is as efficient as this Commission and others who have used it in large quantities believe it to be, it simply puts in our hands an accurate means of determining the existence of the disease."

From this review of the scientific views held by the most expert investigators of the subject of tuberculosis in cattle, it is abundantly apparent that in no way have the additional experiments altered the bearing of the facts upon the position of the subject since the report to this Board was published in 1894.

We have dealt with the subject of tuberculosis at length; but as pointed out in the last report of the Board, the danger from diseased meat, due to other causes, has for years been considered of great importance and has been subject to regulations of various kinds. The report states:

"Ordinarily exposed to the contaminated air of slaughterhouses, and the impure surface of blocks, floors, cloths and knives, the meat is at once inoculated with the bacteria of putrefaction present in infinite numbers. What names these bear is immaterial for our purpose; what they produce is of supreme importance. All are popularly aware of the dangers from a cut of the dissecting knife, and not less real are the dangers from wounds produced by *inoculations* of impure material on butchers' knives and blocks. But in addition to the dangers of infection from certain microbes, there are produced in the favorable conditions of dirty slaughterhouses, in the washings of the floors, in blood, offal and other tissues left to putrefy or be thrown out into hog-pens to be partially eaten and then to putrefy, not only the microbes but their products as ptomaines, or products of dead tissues and the gases which render the air in their neighborhood a veritable valley of Tophet. The effects of these conditions on the health of the animals subjected thereto is in a general way comprehended from the well-known effects of decomposing organic matters in stables and in poultry-yards, being frequently seen in the latter in outbreaks of choleraic diseases in fowls. But whether appreciable in practice on hogs, there can be no doubt of their influence upon residents living in the vicinity of slaughterhouses and pig-pens. Allied to these is that most noisome of nuisances, a knackery. The volatile compounds from the decomposition of flesh, whether of animals or of fish, have too long been recognized as noxious to permit of any question as to their being nuisances in the sense of rendering the enjoyment of life and property uncomfortable; but their positive influence in causing malaise, nausea and diarrhœa must be considered as unfortunately too well proven to admit of discussion. That they play another potent influence in giving to specific disease a serious or even fatal character has now been equally well proven by positive experiments."

With these facts before us we may now turn to some of the remedies which have been proposed for lessening the dangers to the public health resulting from the existence of disease in cattle.

3. Remedies for lessening dangers to the public. The present position of the English Act in regard to tuberculosis is seen in the further report of Prof. Brown, of the Agricultural Department of the Local Government Board of Great Britain, added to the report of the Royal Commission already referred to.

"For some years past complaints have been made of losses inflicted on stock-owners, owing to the seizure and confiscation of carcases of animals found to be more or less affected with tubercle on post mortem examination, although during life they had not exhibited any symptoms of the disease.

"It was frequently urged that tuberculosis should be included among the diseases which were dealt with under the provisions of the Contagious Diseases (Animals) Acts, but it was not shown how the provisions of these Acts could be made to apply to the losses which were the subject of complaint. The matter was not, however, dismissed without due consideration of all the circumstances.

"Early in 1888 the Lord President appointed a Departmental Committee to consider, among other matters, the best method of dealing with tuberculosis, with a view of checking the progress of the disease; the committee reported 'that, in their opinion, tuberculosis should be included in the diseases in the Contagious Diseases (Animals) Acts for the purpose of slaughter and compensation for the seizure and slaughter of diseased animals exposed in markets or fairs,' and there was also a recommendation to the effect that it should be made an indictable offence to breed from animals which were known to be affected with tubercle.

"These recommendations were not adopted by the Privy Council on account of serious difficulties which were emphasized in the report relating to diagnosis, compensation in the case of pedigreed cattle and the improbability of the disease being finally extinguished; indeed the committee only ventured to express a hope that tuberculosis might gradually be reduced to its extent. These points are discussed at length in the annual report of the Veterinary Department for the year 1888.

"Meanwhile the seizure and destruction of carcases of animals found to be affected with tubercle were strictly carried into effect in some districts, and in April, 1890, the matter was brought prominently under the notice of the Government by a large and representative deputation which waited on the President of the Local Government Board and the President of the Board of Agriculture to urge that something should be done to recoup farmers and meat salesmen for losses sustained by what they considered to be the necessary confiscation of carcases only slightly affected with tubercle.

"In reply, the members of the deputation were assured that their representations should be carefully considered, and in July of the same year a Royal Commission on Tuberculosis was appointed by Royal Warrant 'To inquire and report what is the effect, if any, of food derived from tuberculous animals on human health; and, if prejudicial, what are the circumstances and conditions with regard to tuberculosis in the animal which produce that effect upon man.'

"After a long and careful inquiry the Commission was enabled to answer the questions suggested in the reference as far as it is possible to answer them.

"Numerous experiments which were conducted by experts acting under the direction of the Commission left no room for doubt as to the ability of meat from tuberculous animals to act prejudicially on animals which consumed it in a raw or imperfectly cooked state.

"Undoubtedly the chief grievance of the meat salesman is the seizure and destruction of the carcases of animals which immediately before slaughter were, or at least appeared to be, in perfect health and good condition. To avoid this sacrifice of what the witnesses considered to be wholesome food they suggested that a strict inspection of animals before slaughter should be insisted on, and that the authorities should take possession of all diseased animals and compensate the owners.

"The very obvious abuses with which such a system would soon be associated need not be referred to in detail. With the present improved means of diagnosis one benefit would doubtless be gained. *Tuberculous animals might be removed to slaughterhouses, reserved for the purpose, in which the proper means might be provided for destroying or sterilizing meat as might be necessary without any risk of contaminating the carcases of healthy animals.*

"There would be difficulties to be overcome in carrying the proposed method into effect, but it need not be assumed that the scheme is impracticable.

"In regard to the question of compensation, which from the point of view of stock-owners and meat salesmen is an essential feature of the scheme, I can only remark that the subject is so entirely outside the terms of the reference that I should not feel justified in offering suggestions. I may, however, be permitted to remark that the hardships of which meat traders complain would be materially lessened under a properly regulated system of meat inspection by persons competent to judge as to the extent and character of the tuberculous deposits, and to devise and carry into effect the necessary means for preventing the accidental contamination of meat in the way which has been described"

Briefly stated the following are the chief laws regulating the importation, transportation and protection against disease of the herds of cattle of different countries and states.

New York State Cattle Commission, 1892.—1. Inspectors shall try and find animals suspected of tuberculosis.

2. An order to destroy shall be obeyed.

3. Inspectors are to order quarantine, isolation or any other measures which are considered necessary.

4. Inspector shall advise President of Commission when animals are to be killed.

5. Animals are ticketed (by lock and chain).

6. No one can tell the moment when latent tuberculosis may become general.

7. No country has ever stamped out an animal plague except by killing.

Massachusetts, 1894. Laws guiding Cattle Commission.—1. All animals are subject to quarantine until they have been inspected and released by inspector.

2. Every animal which, in the opinion of the inspector, is affected with tuberculosis, must be slaughtered.

3. All animals free from tuberculosis or other contagious disease, shall be branded with the seal of the Cattle Commissioner.

4. The Cattle Commissioners propose to undertake a systematic inspection of all herds in the State.

5. The plan of operation will be the examination of all cattle, by the tuberculin test, followed by the extermination of all diseased animals, disinfection of contaminated premises, and fixed quarantine regulations.

Maine Laws.—Sec. 1. The owner or other person having charge of any animal, or meat or milk of any animal affected with tuberculosis or other contagious or infectious disease, who, knowing that the animal is thus affected, shall hold the animal, or its meat or milk, for human food, shall be liable, on conviction, to a fine of not less than five dollars nor more than fifty dollars.

Sec. 2. Whenever a local board of health or its executive officer has notice of, or suspects the existence of, a case of tuberculosis or of glanders in domestic animals, such board or officer shall forthwith investigate or cause to be investigated the truth of such notification or the grounds for such suspicion; and if there appear to be good grounds for believing that such desire is present, the local board of health, or its executive officer, shall notify the State Cattle Commissioners, reciting in said notification the grounds for their belief or suspicion. And it shall be the duty of the owner or other person having charge of any animal which he knows or suspects to be affected, to notify the local board of health at once.

English Laws.—Importation and transportation of cattle to England are regulated by general orders of Privy Council under Contagious Diseases (Animals) as to—

(*a*) Landing of animals.

(*b*) Quarantine.

(*c*) Most from Canada and United States are landed at Liverpool.

(*d*) No restriction of native cattle except in scheduled infected districts.

This Act requires all railway cars, carriages, and pens to be lime-washed and purified before two o'clock on the day following their use or before being used again for any purpose in scheduled districts. The importance of the inspection is seen in the fact that there were landed (1893) at Liverpool annually some 400,000 cattle; 383,000 sheep; 156,000 swine; 163,000 tons of fresh and compressed meat.

The general powers of municipalities to make by-laws, *re* abattoirs and slaughterhouses are as follows:

1. Any urban sanitary authority may, if they think proper, provide slaughterhouses. They must make laws for the management and charge for the use of the same.

2. Many local Acts provide against the slaughtering of animals elsewhere than in public slaughterhouses.

3. All slaughterhouses constituted since 1875 cannot be used until license of sanitary authorities is obtained.

4. Licenses, since 1890, are annual.

5. It is the duty of English sanitary authorities to license, inspect and register slaughterhouses, byres and knackers' yards, remove filth once, at least, in twenty-four hours, and must have supply of water. A fine of £5 is imposed for any offence, and 10s. per day for continuance of nuisance.

6. Medical officer of staff may at all times inspect buildings, cattle and carcases, and if the officer finds any animal unfit for food he may seize and carry away before a magistrate, "who is required forthwith to order the same to be further inspected and examined by competent persons."

7. Any one selling horseflesh has to advertise it as such.

Public abattoirs have been established in Huddersfield, Manchester, Liverpool and Swansea. These have been established to remove the evil which existed through defects in management and construction of private slaughterhouses.

8. The city of Huddersfield, with a population of 178,000 in 1891, had passing through the cattle market in the same year, some 8,438 cattle and 2,263 pigs. The number of animals killed in the abattoirs for the same period was as follows: 5,255 beasts, 2,524 calves, 3,000 sheep, 5,985 pigs.

Law in France.—Atle. 9. When tuberculosis is discovered in any animal of the bovine species, the prefect is to issue an order to put the animal under the surveillance of the veterinary health officer.

Atle. 10. Every animal recognised to be tuberculous, is to be removed from its neighbor and isolated. It must not be sent away, except in order to be slaughtered. The slaughtering is to take place under the surveillance of the veterinary health officer, who is to make the autopsy, and send to the prefect the written notes of the autopsy within five days of the slaughtering.

Atle. 11. Meat from tuberculous animals is to be excluded from consumption.

(*a*) If the lesions are generalized, that is to say, are not confined to the visceral organs and their lymphatic glands.

(*b*) If the lesions, although localized, have invaded the greater part of the viscus, or show themselves by an eruption on the walls of the chest, or of abdominal cavity.

(*c*) This meat forbidden as food, and also the tuberculous viscera, are not allowed to be used for the feeding of animals, but must be destroyed.

Atle. 12. The use of the skin is not permitted till after disinfection.

The sale and use of meat coming from tuberculous cows is forbidden.

However, the milk can be used on the spot for the feeding of animals after it has been boiled.

Laws in Germany.—1. The meat of all tuberculous animals is declared to be unwholesome and unfit for consumption.

2. Inspection to be carefully made of all suspected cattle.

Laws of City of Boston, 1894.—1. Prior to 1894 all animals showing slight lesions had not been condemned.

2. By Act 1894, (June), all in any way suffering from tuberculosis are condemned.

3. Since November, 1894, Massachusetts Board of Cattle Commissioners has made a systematic examination of all animals at stock yards.

All animals suspected of tuberculosis are condemned as unfit for sale.

4. All healthy are branded and sold anywhere.

5. All condemned are sent to abattoirs and destroyed.

6. All were examined by Cattle Commissioners and regular inspectors of abattoirs.

7. Those found free of disease on slaughter are sold for beef.

8. Number received and condemned: 6.3% tuberculous.

Municipal Abattoirs.—The following gives a summary of the rules regulating cattle markets and abattoirs in the several cities of Europe:

Metropolitan Market, London.—1. Slaughter floor, 200 x 440 yards square.

2. Only one animal admitted at a time to permit of individual inspection.

3. There is a clerk of the market with two officers to receive dues and prevent the introduction of diseased animals except into special lairs.

5. The abattoirs are near the market.

6. Cattle can go only through certain streets and before mid-day.

Edinburgh.—1. Slaughtering can only be carried out in the public abattoir for the city and a radius of two miles of city limits.

2. Penalties for selling diseased meat there are more severe than anywhere in the world.

3. All animals are examined before slaughtering and afterwards.

4. All flesh of diseased animals is destroyed or so treated as not to be used for food.

5. A pleuro-pneumonic animal is destroyed at abattoir, the owner gets three-fourths compensation.

6. Foreign meat has to go to abattoir and be examined before being exposed for sale.

7. The owner of each carcase or part of one pays there a fee of as much as if the animal had been slaughtered there, and he cannot bring herd, bones or hoofs to the city.

8. These regulations rendering imported carcases dearer than that slaughtered in town has resulted in most animals being brought to slaughterhouse, thereby insuring complete supervision.

9. Pig flesh is not specially examined for trichinæ in Edinburgh and London. Sale of meat is unrestricted, with close inspection.

Brussels since 1878.—1. Slaughtering allowed only at abattoirs.

2. Meat inspected and officially stamped.

3. Dead meat brought into town, whether fresh or salt, must be examined and stamped at the station for the purpose. Charges, three centimes per millogramme.

4. Owner of meat must state name, address, destination; this is mentioned in certificate of inspection, with day and hour.

5. Meat must be conveyed direct to destination.

6. Meat introduced to town by private individuals, for their own consumption, is exempt from inspection, but if required they must give name and address.

7. It is not permitted to transport meat from towns other than those named.

8. Offal can only be prepared at the abattoir. Abattoirs much the same as elsewhere; intestines collected in a room for dressing tripe; here opened and contents cast on ground. Paunches are there treated and prepared for tripe.

9. Abattoirs municipal property.

10. It is forbidden to kill and dress animals for food, to melt coarse fat, to prepare and cook offal except in the public abattoir.

11. All tripe dressers and fat boilers get space at abattoir, but must submit plans of stoves, etc, to burgomasters.

12. *Staff.*—1. Chief inspector, a veterinary surgeon.

2. Expert inspector is a veterinarian or experienced butcher.

3. A collector, a chief of service or custom's officer.

4. Duty of inspector, to examine all animals entering abattoir and all meat before being taken away.

5. Animals intended for sale are previously visited.

Paris.—1. Cattle can only be killed in municipal abattoirs.

2. All cattle injured in transit must be inspected before meat can be sold.

3. In all cases the meat of animals dying a natural death must be destroyed at expense of owner.

4. Beasts suspected of disease must be kept in separate place and killed only in presence of inspector, who must examine viscera. Meat and offal must all be examined.

5. If lymphatics are affected with tuberculosis, seizure is imperative, otherwise only parts injured are condemned. In all examinations at least a quarter of the animal must be submitted to inspection.

6. Veterinary inspectors are at all abattoirs.

7. All establishments for making tripe, sausages and rendering fat, are at the abattoir.

8. The largest and most modern is that at La Villette.

Berlin.—1. Councils are required to establish compulsory inspection of animals for slaughter and of meat before it is exposed for sale.

2. Abattoirs contain ground of about twenty-two acres.

3. Suspected animals from country are set apart for observation.

4. Seized meat must be placed in police officer's office.

5. Rendering rooms, tripe rooms, etc., are at the abattoirs.

6. All wagons which have brought cattle are cleaned and disinfected on the spot. Some, 80 per day. They are scrubbed with a brush with a solution of carbonate of soda, 500 grammes per litre of water at 70° C.

Leipsic.—This abattoir is a model of its kind.

1. Ground has an area of 115,000 square metres, some twenty-three acres.

2. Floor of abattoirs is covered with cement all sloping toward a centre, through which runs a trench.

3. The offal (paunches, etc.) are carried towards one spot dipping towards the centre, under this cars, into which contents of paunches are cast therein.

4. Overhead are trolleys, by which the meat is transferred to the adjoining depots where is a refrigerator.

5. Blood as elsewhere, made into albumen and fertilizers.

6. Fat rendering, tripe, etc., carried on at abattoir.

Vienna.—1. All cattle brought to Vienna must be accompanied by a certificate of health.

2. On arrival they must be examined by the veterinary surgeon of the city.

3. This great cattle market cost some $700,000.

4. The cattle market is covered by a strong iron roof, on iron pillars; has room for 4,000 cattle and stables for 2,140 more. The separate place for calves, holds 4,300; market for pigs holds 8,800.

5. The abattoir near the market is similar to those described.

6 According to Austrian law each town is bound to supply and maintain an "Aasplat," *i.e.*, an establishment where diseased animals can be taken and subsequently disposed of. There

(*a*) All available parts are collected after carcases are destroyed by thermo-chemical current.

(*b*) Keeper's house on grounds. All these establishments have rooms for preparing products and also drying rooms.

(*c*) The carcases are cut up and cooked in digestèr; fat separated; glue made; flesh and bones boiled, dried and made into manure.

(*d*) All carcases which cannot be utilized are put into pits and covered with lime.

By a reference to the foregoing summary of laws, both national and municipal, we at once discern the existence of the more or less distinctive principles underlying the work of cattle inspection.

The one is that which is represented in Canada by the powers of the Federal Government to control by legislation, quarantine and local inspection, the importation and exportation of cattle and their products, when such work is seemingly demanded by the commercial interests of the state.

This is illustrated by the Orders-in-Council, which regulate the inspection and slaughter of all food products imported into England from foreign countries, and by the scheduling of certain districts of Britain, when such a disease as pleuro-pneumonia or rinderpest have there become epidemic in native herds of cattle. Similarly in Germany, the inspection of foreign cattle and meat is rigorously carried out by the Imperial Government, and common action urged upon all the Federal states.

The first steps in this direction seriously taken in the United States were then established under the law of 1884, by which the Federal Bureau of Animal Industries undertook the inspection of all dead meat intended for export by the great meat companies of Chicago, etc. This is to be supplemented in a most extended way, under the bill at present under consideration by Congress, for dealing with such diseases as tuberculosis.

The second principle is likewise similar to that carried out, to some extent in Canada, whereby the States and Provinces enact laws giving State Legislatures powers of general supervision of the work, which under municipal law is required to be carried out by municipal authorities. These general powers are in some German states, and especially in the United States of America, supplemented by such executive boards, as those of the State Cattle Commissions, which are appointed by the State and are empowered to appoint sub-inspectors, clothed with authority to go into all parts of the State and condemn diseased cattle, as well as to prohibit, as in Massachusetts, the importation of any cattle without their being subjected to the closest inspection, and where found diseased, destroyed.

In Canada this latter principle has not yet been put into operation, Provincial authorities so far dealing with the work of cattle inspections wholly by means of public health enactments, intended for the protection of man against diseased or unsound food.

In every country, however, this latter principle has for many years been carried out to some extent, municipalities or commissioners being clothed with power to protect their own people by by-laws regulating the slaughter and sale of meat. In Canada, municipalities imitating English practice, have for many years

had by-laws, some of which have been incorporated into the Public Health Acts, and made statuary law. These have in Ontario, during the past ten years been notably added to; and to-day Ontario municipalities are empowered to push the matter of municipal inspection of cattle and foods almost to any extent they may deem necessary. With all this legislation, however, after twelve years, we find that there does not exist in Ontario, so far as your committee are aware, a single instance in which the inspection of cattle subsequent to slaughter, and before being placed in the hands of the consumer, is systematically carried on, and only in Toronto, and that only for cattle imported by rail, are the cattle seen by a city official prior to slaughter.

That the general health of the Canadian cattle has proved excellent as regards the acute contagious diseases, and given them hitherto, a good name in the British market, must be a matter of congratulation; but the same was to be said of those neighboring states with climates and modes of farming similar to our own.

It would be idle, however, for those who have been engaged in municipal health work during the last ten years, to deny that facts are now frequently being brought to their notice, pointing to the need of exact and systematic supervision of our own town foods, exactly after the manner which has been in practice in a number of the chief cities of Europe for years.

In a preceding part of this report, the methods of inspection and slaughter in Edinburgh, Brussels, Paris, Liepsic, Berlin, Vienna, etc, are given in some detail, but the following are the principal points included in the regulations governing the most complete system:

1. All cattle brought to the city (Vienna), must be accompanied by a certificate of health from the inspector of the municipality where they were bought. In this way the state authority can keep informed as to the presence of disease in any locality.

2. On arrival at the cattle yards, or market, every animal is inspected by a veterinarian, and those suspected of disease, placed in a separate yard or building. According to Austrian law, each town or "commune" is required to maintain an "Aasplat" or establishment where diseased animals can be taken for final disposal. All utilizable parts are collected, the carcases being destroyed by the thermo-chemical current. This establishment has quarters for preparing the meat as digesters, preparation of artificial manures, etc., all cattle injured in transit must likewise be inspected before meat is sold, and all animals dying a natural death must be buried at the expense of the owner (Brussels).

3. The stock-yards or cattle markets are in some cities of great extent, none, however, equal to that of Chicago.

4. All wagons, as at Berlin, which have transported cattle, are at once washed down with a solution of 500 grammes of carbonate of soda, per litre of water, at temperature of 70°C., some eighty wagons are utilized there daily.

5. In all these cities, at Vienna, Berlin, Edinburgh, Brussels, etc., cattle can only be slaughtered at the abattoirs. This power in Edinburgh extends to the control of the area for two miles outside the limits of the city.

6. The abattoirs and cattle yards are everywhere under the control of a chief inspector, who is a veterinarian and has a staff of trained veterinarians or old experienced butchers. (Brussels).

7. Their duties are to inspect all animals entering the abattoir, and all meat before being taken away. A primary inspection of these animals has been made at the cattle market.

8. All meat which has passed inspection is ticketed and stamped before being transferred to the meat market, which commonly is contiguous to the abattoir.

9. All flesh of animals diseased (Edinburgh) is destroyed or so treated as to not be available for food. An animal (Edinburgh) affected with pleuro-pneumonia has carcase destroyed and the owner gets three-quarters compensation in virtue thereof.

In Paris the rule is, that if the lymphatics are affected with tubercles, seizure of carcase is imperative, otherwise only the parts affected are condemned.

10. The owner of every animal slaughtered at the abattoir pays a fee, and at Edinburgh every owner of a carcase, already killed, has to take it to the abattoir for inspection, and pays as much for this inspection as if the animal had been slaughtered at the abattoir.

11. All foreign meat (Edinburgh), has similarly to go to the abattoir for inspection before being exposed for sale; while in other cities, as Brussels, all dead meat brought into the city, whether fresh or salt, must be examined and stamped at stations established for this purpose.

The charges for inspection (Brussels) is three centimes per millogramme.

12. All meat thus inspected and ticketed must be conveyed direct to its destination, which name and address is registered at the bureau.

13. The sale of meat is unrestricted (Edinburgh), as to shops, but these are under close inspection.

14. No one is permitted (Brussels) to transport meat from towns other than those designated, into that city.

15. In every instance provision is made at the abattoirs for buildings or rooms wherein all the fat-rendering, tripe-making, sausage-making, albumen and fertilizers are carried on.

16. Inspection for trichinæ is made at every German abattoir.

The arrangements of every abattoir in these cities are similar and consist essentially:

1. Of covered lairs or yards paved with concrete or flag-stones. (*a*) For cattle; (*b*) for sheep and calves; (*c*) for pigs.

2. Killing-rooms, first three classes separate.

3. Refrigerator or store-room.

4. Boiler-room.

5. Rooms for fat-rendering, tripe-cleaning, etc.

6. Offices and caretaker's quarters.

Some of these abattoirs and cattle yards are of great extent, one of the most perfect being, that at Leipsic, the ground of which includes 115,000 square metres, or some twenty-three acres. The Vienna cattle market cost $800,000.

The killing-rooms are paved with concrete, and walls to some six feet from the floor are made of concrete slabs or tiles.

5. *Recommendations.*—We have, in this extended review, indicated the present position both of Canadian herds, and of the situation as regards the supervision of cattle and meat products in Ontario, as compared with other countries.

With regard to the cattle and meat intended for export, it is not for this Board to indicate what steps ought to be adopted to secure for Canadian exports, that standing which would most commend them to the attention of foreign countries. As regards, however, the domestic supply, there seems no room to doubt that as positive measures should be taken, as in neighboring states, to remove from our cattle the opprobrium of tuberculosis and the dangers to the people arising from the use of the meat and milk of such. If it has seemed necessary and advisable for Massachusetts, with a total value of live stock amounting to but $14,200,178, to appoint a commission armed with all the powers to suppress the disease in cattle, it surely cannot seem too much that Ontario stock, with a value of $116,070,902, should not only be inspected and protected by stringent enactments, but that our own people be protected against dangers to life proceeding from diseased food products.

If further, the solution of the difficulty is in giving compensation for the destruction of tuberculized cattle, where, as in the five New England States, and New York, New Jersey and Pennsylvania together, the total live stock values of $313,902,504 are less than three times the values of Ontario stock, surely it cannot be questioned whether it would be from the economic standpoint, profitable, to initiate the same methods for dealing with our own stock.

If, indeed, it be true that our cattle are free from the taint of disease, as many would like to believe, then we could publish a certificate of health that all the world would acknowledge; and if they are not, then with all that is involved in allowing a contagious disease to spread, it seems the height of wisdom and prudence, in the light of all the facts, and the known action being taken in European countries and in at least fourteen neighboring states, where the housing of cattle in winter (the one supreme condition of infection) is not longer than in Ontario, and where the herds have been improved from essentially the same sources of thoroughbred cattle, which may be assumed to have introduced the disease, to institute similar action, and to supplement it by the compulsory establishment of cattle markets and abattoirs for the inspection of all milch cows for our public supply of milk, and of all animals intended for consumption as food for man.

Your committee begs respectfully to move the reception of this report.

Signed,

E. E. KITCHEN,
F. RAE,
P. H. BRYCE

REPORT *RE* LONDON PORK PACKING ESTABLISHMENT.

TORONTO, August 15th, 1895.

To the Chairman and Members of the Provincial Board of Health:

GENTLEMEN.—It will be remembered that a report bearing upon this matter was presented to the Board in November of last year, and that it included certain recommendations to the Local Board of Health and the Company.

Owing to complaints being again made as per correspondence submitted, I visited London on July 2nd, and in company with one of the complainants for the residents along the creek, and Mr. Ginge for the Company, went over the factory and sewage disposal works.

As related in last year's report, the factory is kept in most admirable order and quite extensive additions have been made to the sewage disposal works along the lines of last year's report. A series of small beds have been set apart specially for the condensed steam water coming from the rendering tanks and which had more or less of fatty product in it. These beds were ample for the small amount from this source.

A weekly removal of the contents of the settling tank on the main drain takes place, and by a series of shallow tanks in the main wooden conduit, a further opportunity for settling is given, so that the floor washings will pass to the filter beds with as little solid matter as possible. These beds have been greatly enlarged and improved. The three main ditches having a total area of 6x300 feet in all, were wholly renewed this year, the old materials thrown out, and new sand being put in to the depth of nearly three feet. Subsoil drains lead from Nos. 1, 2, 3 to the flat beds across on the lower level, which has been levelled and made new. Of these two lower beds the area is about 100x50 feet.

The attempts made by the Company to place a free effluent into the creek, have been most praise-worthy, nothing that was suggested to them either in the report or by the Local Board being neglected.

The atmosphere within the neighborhood of the beds is very free from the smell or effluvia of decomposition, and the beds seem ample for the passage downward of the sewage.

As there is however, after the passage of the materials through the beds, a slight tinge to the water from some of the sub-soil tiles, it becomes a matter of interest to disclose wherein the failure to filter lies.

It has been the custom to pour one day's sewage into one of the upper ditches. These now as already stated, are all made over by having put in new sand from a sand pit, purchased for this purpose specially. Through this the water filters quite fast and on the day visited the water had quite disappeared from the ditch. Also water had reached the tiles from the lower filter beds and was appearing in the tiles leading to the creek. It is apparent that the filtering material works too rapidly for perfect purification; but there was an additional fact in that there was on the day of our visit a frothiness on the water standing within the flat bed, due to the fact that on that day all the brine from the pickling hogs-heads had been drained off to be recharged.

Apparently then what has happened is that the old film of organic matter with its nitrifying bacteria presumbly present on the surface of the old beds was removed, while the growth of the new seems likely to be checked by the occasional dosing with a brine saturated with salt.

After explaining the reason for supposing the beds were not being handled to do the best work, I made the following recommendations, which I have no doubt will be carefully followed out.

1st. Keep the fluids from the rendering tank in their separate beds.

2nd. Run the fluids from the brine tanks into a new and separate small filter bed

3rd. Spread each day's floor washing over the surface of two ditches instead of one, thereby making the filtering area as great as possible.

4th. Use a cultivator and stir the surface of the ditches once a week by shallow cultivation.

5th. Use milk of lime for precipitating the albumin in the sewage by mixing it before it goes into the tanks.

By a careful carrying out of these additional recommendations, I have no doubt but that a very notable improvement will result in the character of the effluent, which so far as appearence goes at present cannot be said to be bad; but which contains much albumenoid matter.

With the excessive drought of June and July, the creek was dry, there being no relieving shower; so that the little accumulations of water in pools lay evaporating with a resu't that the organic contents became more concentrated and vegetation of green algæ increased on the surface. The effluvia at night-fall were said by the several farmers near by, to be very bad; but it was not observable during the day, a fact however familiar to us, in connection with many effluvia nuisances.

While advising the Local Board of Health to maintain the close supervision of the filter beds, and while urging their frequent inspection to see that recommendations are carried out, I do not think there can be any nuisance continuing of a very serious character. Certainly there will be none with water in the creek; but with the Company willing to do everything suggested to cleanse the effluent, I feel certain that the filtering quality of the beds as they grow older will improve, and with experience on the part of those managing. I look forward to seeing an effluent free from objection

I have the honor to present the report for adoption.

Your obedient servant,

PETER H. BRYCE,
Secretary.

REPORT ON THE SELECTION OF A SITE FOR A CEMETERY IN MARKDALE, COUNTY OF GREY.

To the Chairman and Members of the Provincial Board of Health:

GENTLEMEN,—The Council of Markdale, a village situate at the junction of the Townships of Artemesia and Glenelg, County of Grey, having sent an application to this Board, requesting, on sanitary grounds, an opinion as to the eligibility of one or other of two sites for a cemetery within the limits of the village, I was informed by Dr. Bryce that it would expedite matters, if a representative of this Board would personally examine the proposed sites. Accordingly a letter making an appointment for the 8th inst., having been sent to Mr. W. A. Brown, secretary of the local board of health, and likewise village clerk, your committee went to Markdale on that day. The following residents of the village met and consulted with your committee: Mr. Rae, reeve; Mr. Brown, village clerk; Mr. Armstrong, member of the local board of health; Dr. Ego, medical health officer; Mr. Boland, chairman of the cemetery committee, appointed at a public meeting, and Dr. Sproule, M.P.

Your committee was informed that at a public meeting held in the last week of September, to consider the choice of a site for a cemetery, it was decided by resolution, to submit two sites for approval on sanitary grounds alone. Either site would be purchased and would receive, if selected, the sanction of the local board of health. The villagers, however, would prefer a personal inspection of a member of the Provincial Board of Health, so that they might feel clear to act through the committee having the matter in hand. The Council also, before making a definite selection, and passing the required by-law, wished to submit the matter to your Board, as required by law, (*vide* Sec. 2, "*b*" Consolidated Municipal Act).

The plan which is herewith exhibited, will enable you to form an idea of the main streets of the village, and the position of each of the two sites. The first site visited belongs to Mr. Marsh, a village hotel-keeper, who is willing to sell his land for a cemetery. It is situated on Toronto street, about five-eighths of a mile from the village centre and is quite close to its southern portion. It consists of six acres of well-cleared land, which slopes gently to the south-east, and drains into a small creek, which winds around the base of the declivity. A never-failing spring of fresh water, also rises on the south-western slope of the declivity. I had a pit dug to the depth of five and one-half feet, in order to learn the quality of the soil. The top layer consists of loam about twelve inches in depth, beneath which is a friable clay, containing a considerable quantity of limestone, and a little quartz sand and about one per cent. of gravel. The nearest house on the same side of the road, is thirty-three rods away; over the way on the opposite side of the road are some farm buildings belonging to Dr. Sproule. The creek which skirts the property, receiving the drainage of surrounding farms, connects with Armstrong's creek, which spreads out into a pond. A saw-mill, about three-quarters of a mile to the west, discharges over a dam. The principal objections urged against this property were: (1) Its proximity to the village; (2) The fouling of the above mentioned creeks by drainage from the cemetery, and (3) The insuitability of the soil. The first objection is of little weight, because there are but few houses in the vicinity, and the population numbers only 950 souls, and is not increasing. The second objection, that a fouling of the water of the creek might ensue, was considered of considerable weight by some of the villagers,

inasmuch, as the future water supply of the village might be taken from the pond near the saw-mill, about three-quarters of a mile distant, to which I have already alluded. The creek might at present be used as a supply of water for fire purposes, but would not be suitable as a supply for potable water, without filtration. It is not likely that any measurable impurity would be added to the waters of this creek from the Marsh site, if used as a cemetery, because the drainage of the water through one hundred yards or more of soil, would purify it; and besides the mortality of the village is only said to be five per annum. Besides the future village water supply may be obtained by boring into the rock, pumping a supply by wind-mill which could be stored in a tank and made to descend by gravitation into mains distributed through the village. The third objection as to the quality of the soil, has a considerable force. The soil is principally clay, and it would therefore be retentive of moisture, so that it cannot be considered as suitable for a burial ground as pure gravel or sandy soil. Returning towards the village centre, we passed the burial ground of the Church of England. This has been used as a cemetery for some years; but after the new site is chosen, it is proposed to close it. The new cemetery site in Markdale will probably be used as a union cemetery by the various Protestant denominations, the Catholics having already a site in the Township of Glenelg. The second site visited, belongs to Mr. Oswald Walker, who is willing to sell his land for cemetery purposes. It lies on Mill street, in a north-easterly direction, and is about five-eights of a mile from the village centre. It is really the back end of the Walker farm, the front portion of which rests on a village street. This site is six acres in extent. The residential property is not growing so much along Mill street as along Toronto street. The surface of the Walker plot is rough and uneven, many stumps being still present, so much so indeed, that an expenditure of from $300 to $400 would be required to clear it up, and make it suitable for a cemetery. The nearest creek runs into the Saugeen River, about half a mile from the site. A section of the soil shows that it consists of three or four inches of loam, lying over a loose, coarse gravel. The objections urged against this site are: (1) That the gravelly soil is so loose, that the sides of a grave dug in it would fall in, shortly after being dug, particularly in spring, and (2) That it would cost $300 to $400, to prepare it for cemetery purposes. The first objection has been disproved by actual test, and the reeve, Mr. Rae, states, that the sides of the pit remained quite firm and did not fall in. The second objection, is one which it is not necessary that I should discuss. With regard to the suitability of this site for a cemetery, there can be no question, as a gravelly site is very permeable to air, and permits the rapid decay of dead bodies, which are interred in it. The drainage would be excellent all the year round, and would flow towards the Saugeen River, so that no wells would be injured.

My opinion therefore is that, while the Marsh property, might be used as a cemetery without detriment to the health of the people of Markdale, while it is as accessible as the Walker property, and could be more cheaply converted into a burial ground, it is inferior as a site for a cemetery, particularly owing to the quality of the soil.

In concluding this report, I would refer to the opinion of Dr. George R. Rohé, a distinguished sanitarian, and member of the American Public Health Association, who, in a recently published Text Book of Hygiene, writing of interment says: "The soil of a burial ground should be dry and porous, so as to be easily permeated by the air." In a sandy or gravelly soil, the decay of a corpse is much more rapid than in a moist clayey soil. In the latter the bodies more readily undergo putrefaction, or become converted into a substance termed

adipocere. It has been calculated that in a gravelly soil, the decay of a corpse advances as much in one year, as it would in sand in one and two-thirds and in clay in two to two and one-third years. The decay of dead bodies is principally (if not entirely), dependent upon the presence of living vegetable organisms. If the access of free oxygen is prevented the bacteria of putrefaction will thrive and cause putridity. If, however, the soil is loose, porous and easily permeable by the air, the bacteria of decay will be present and produce their characteristic effects.

For sanitary reasons therefore, I consider the Walker site in Markdale more suitable for a burial ground than the Marsh site; but should it, however, be the view of the majority of the villagers that the convenience of most will best be consulted by the adoption of the Marsh site, it would be well to state that a protest has been received from a resident, whose property is situated very near said property, and that therefore it will be well for the cemetery committee of Markdale, to consult the bearing of sec. 489, sub-section (d) Consolidated Municipal Act, R.S.O., 12 d, 1887, before any final decision is made.

All of which is respectfully submitted,

(Sgd.) J. J. CASSIDY, M.D.

REPORT OF THE COMMITTEE ON PUBLIC WATER SUPPLIES ON THE WINDSOR OUTBREAK OF TYPHOID FEVER IN 1896.

To the Chairman and Members of the Provincial Board of Health:

GENTLEMEN:—As is stated in the evidence appended to this report of Mr. J. A. H. Campbell, Chairman of the Local Board of Health of Windsor, your Board was informed in February of a reported prevalence of typhoid in that city, and that the said Board was recommended by your Secretary, to obtain through physicians and others, a correct report of the prevalence of this and of any similar disease existing in the town. The Local Board, with commendable activity, prepared a blank form of report, and supplied one to each physician, with a request to give detailed answers to the questions contained therein. As stated in the evidence of the same witness, all physicians but one had reported at the time the investigation by your committee was held.

These reports with these several other documents are herewith presented: (*a*) The conclusions of the Local Board on the physicians' report. (*b*) A copy of the agreement between Windsor and Walkerville, dated 22nd September, 1893, made the basis of the settlement in the court proceedings, and attached to the judgment thereof. (*c*) A copy of a report by water commissioners with the report of W. Chipman, C.E., on a plan for obtaining a common supply for water for the two towns, and forming the basis of the aforesaid agreement, also a plan or map of the district. (*d*) Extracts from minutes of the proceedings of the Local Board of Health since January, 1896. (*e*) Copy of resolutions adopted by the Windsor Physicians' and Surgeons' Association.

In order that the Board may be in a position to understand the situation in Windsor, your Committee desires to give a brief resumé of the chief facts since the public water supply of Windsor was established.

In 1872 a waterworks station was established at the point indicated on the plan of Mr. Chipman, on the bank of the Detroit river, within the limits of the town of Windsor, where it remains at present, and situated some 3,000 feet

below the township drain, which empties into the river within the town of Walkerville, and which within the town becomes the main sewer. It will be seen that the relative position of the Windsor waterworks and the sewage outfall confirms the evidence of Dr. Coventry, for some twenty-five years a practitioner in Windsor, and who was mayor in 1881, 1882 and 1883, and medical health officer for some twelve years, that "The water supply from its adoption to the present time has always been contaminated by the material emptied into the river within three-quarters of a mile of the intake pipe, which contamination has at different times consisted of the refuse from cattle barns, pork-packing establishment, glucose and starch works; but worse than all from the contents of the Walkerville sewers. Other contaminations are from factories, and the vegetable material from the shores of Lake St. Clair and from the lake itself and from the southern shore of the Detroit river."

In 1887 the waterworks station was burned and at that time it was stated that Walkerville was willing and anxious to join Windsor in the establishment of a common supply to be taken above the latter town, but that negotiations were broken off. A new pumping house was built, and then or afterwards the intake pipe in the river was extended from 167 to 250 feet into the stream, but a valve was left nearer the shore, 115 feet out, in case a stoppage should take place at the intake proper. Such was the position in 1893 when the Windsor Water Commissioners instituted proceedings against Walkerville.

In the report of the Water Commissioners, included in the pamphlet published before the submission of a by-law on July 7th, 1893, which was defeated, and signed by William Edgar, chairman for the commissioners, W. J. McKee, now M.P.P., and C. E. Fleming, mayor, after quoting analyses by Dr. Pyne, J. J. MacKenzie, B.A., and Prof. Ellis, all asserting the pollution of the river water, it is stated: "These results by competent examiners, coupled with the report by Dr Bryce, Secretary of the Provincial Board of Health, that he saw about three or four million gallons of sewage emerging in twenty-four hours from one of the Walkerville sewers, coloring the water of the river for two-thirds the distance to the Windsor intake, and our own observation of what is daily taking place, leads to the inevitable conclusion, that in order to supply water fit for use for domestic purposes, we must go above the point of contamination."

On the agreement of the two towns, made on the order of the court September 22nd, 1893, the Council passed a by-law in November, 1893, for the issue of debentures for the construction of the proposed common water main from Askin's point on the plans of Mr. Chipman, but it was afterwards quashed by the courts on the ground as stated in the evidence, that the borrowing limit of the town had been reached. (See evidence of Coventry, Smith and Hall.)

Subsequent to this, at the January elections in 1895, a by-law was submitted for the institution of a filter plant at a cost of $40,000, the pumping station to remain with the intake in its present position. This by-law was also defeated, and as stated in the evidence of Dr. Casgrain, now chairman of the Board of Water Commissioners: "Since then the principal work was to extend the present intake 500 feet into the river by a twenty-inch pipe, and the construction of a fifty-foot well by eighteen feet deep, with two compartments, at an estimated cost of $12,000."

No analyses of water have been made during this period; the water supply has been bad; but notably so since the flood at the beginning of January. At that time on one morning, in drawing water from the tap, it had a strong smell

and tasted of manure. This lasted until afternoon, when the water was blown out of the hydrants. The cause of the sudden influx of manure was stated to me by a workman from Walker's, to be due to the breaking of an embankment around the field, and as the manure did not come so much by afternoon it was stated to me the embankment was repaired."

This, then, briefly stated, is the history of the Windsor waterworks, as given by town officials and official documents, down to January 25th, 1896, when the circumstances just stated occurred, and which became the occasion, according to unanimous medical testimony and the sworn statements of the present Water Commissioners, of a sudden explosion of fever, which had spent itself largely by the middle of March.

Specific Evidence of Pollution from Walkerville Sewage.

1. In a report of your Secretary made in May, 1891, it is stated: "When seen by me, the sewer (Walkerville) was emptying probably three or four million gallons of sewage in twenty-four hours, which was of a brown color, and gave off the characteristic smell of cow manure." The black stream of liquid in its course down the river was visible for two-thirds of the above distance (less than 3,000 feet).

2. The report on Windsor water supply made to the Provincial Board October 12th, 1893, by Mr. J. J. Mackenzie, states: "Whilst in Windsor attending the trial, Dr. Bryce, Mr. Chipman and myself determined to make a test which might possibly settle the question as to whether pollution existed or not. With that end in view, there were procured two barrels of salt, which were emptied into an ordinary water cart containing 600 gallons of water. The water was heated by passing live steam through it until the salt was all dissolved, and the brine thus obtained was taken up into Walkerville and emptied into the sewer about 200 yards from the point at which it opens into the river. At the same time a float was dropped into the river at the sewer outlet as soon as the flood of brine reached that point, that being indicated by the sudden increase of the flow. Shortly after this float passed the Windsor waterworks intake samples of water were taken from the river at that point, (both surface and deep) and at the same time from the tap in the Windsor waterwords pumping house.

Twenty samples in all were analyzed by the salt test.

The average chlorine in the normal river water at three points shallow and deep was 1.5 per million parts.

Of six samples during the salt flow, the average was 3.15 parts per million, the lowest being 2.8, and the highest 3.5.

On the passing of the salt flow the river water fell slightly below the normal, probably due to the temporary flushing of the sewer.

3. The flood of manure which came down on January 25th, 1896, so as to cause the water to taste and smell of manure in taps in all parts of Windsor.

4. A test made by John Davis, Esq., Inspector of Distilleries, as given in sworn evidence.

"About the month of June some three years ago, I happened to be boating near the water pipe, and arranged a jug so that the cork was forced in by the water pressure at about twenty feet from the surface in thirty feet of water. I compared the sample with one taken from the surface at about the same point,

and allowed them to sediment in graduated tubes. I found within eighteen hours that the amount of sediment in the deep sample was four times that on the surface. As a result of this test there has not been since then a drop of water in my house drunk without boiling and filtering. We have not since had any sickness, while before that Dr. Casgrain would bear evidence that we were seldom without it."

Evidence of the Recent Outbreak of Fever.

All the sworn evidence agrees that there was a freshet in the end of January, and that notably it was at its height on January 25th, the ice in the river having broken up, and according to the chief engineer of the waterworks, the river was filled with floating ice. On the 10th of March, 1896, the following resolution, according to statement of the Secretary, was unanimously adopted by the Windsor Physicians' and Surgeons' Association :

Resolved,—" That this Association is unanimously of the opinion that the present epidemic of typhoid and gastro-intestinal fever in Windsor is due to polluted water supplied to inhabitants and we hereby reiterate the opinion of last year that nothing short of a new water intake pipe above the point of pollution will ensure the safety of the health and lives of the inhabitants."

According to the report of the Local Board on the reports sent in by physicians in regard to the outbreak it is stated that all except one resident physician had reported. In the evidence of one physician of Walkerville it is stated " that he had five cases actually tabulated." Excluding references by several physicians to mild cases not returned, and others which occurred up to the 15th of March, and subsequent to the returns made by them, these would make 167 cases of fever.

The following is a summary of the statistics given in the reports of the physicians :

Reports received	12
" giving details in full	7
" giving no cases	2
" giving cases with no details	3
" giving no opinion	2
" giving cases with no details, but opinion that water was cause	2
" giving details, classifying fever as typhoid, with other cases as bilious remittent	1
" classifying fever as typhoid and gastro-intestinal	1
" classifying fever as typhoid and bilious with typhoid symptoms	1
" classifying all cases as gastro-intestinal	1
" classifying fever as typhoid, and divided into severe, ordinary and mild types	1
" classifying fever as typhoid only	1
" classifying fever as typhoid mild	1
Total cases with names and addresses given	126
" without names or addresses	36
" in all to time of reports being made out	162

Cases by weeks—

Week ending December 3rd, 1895	3		
" " 10th, 1895	1		
" " 17th, 1895	2	9	
" " 24th, 1895	2		
" " 31st, 1895	1		
" January 7th, 1896	3		
" " 14th, 1896	5		
" " 21st, 1896	3	18	
" " 28th, 1896	7		
" February 4th, 1896	17		
" " 11th, 1896	32		
" " 18th, 1896	20	82	
" " 25th, 1896	13		
" March 3rd, 1896	7		
" " 10th, 1896	3	13	
" " 17th, 1896	3		

Several facts are apparent from these statistics, and the first is that typhoid in Windsor has not been limited to a single period, but was present in all the winter months, or as stated in Dr. Carney's evidence regarding his experience in Windsor during twenty years: "I ascribe the disappearance of the malaria to surface drainage, and the appearance and increase of gastro-intestinal fever to the pollution of our water supply with animal excreta as well as vegetable."

In the words of other physicians, typhoid is endemic in Windsor, and that this is common medical opinion is seen in the resolution of the Association of June, 1895.

Copy of Resolutions adopted May, 1895, and sent to Board of Water Commissioners by the Medical Society.

"We are of the opinion that the water supplied to the inhabitants of the city is polluted with washings from the alluvial shores of Lake St. Clair and the Detroit River, besides a large amount of vegetable matter which grows very rapidly in Lake St. Clair.

"It also contains in variable quantities the sewage of the Town of Walkerville.

"We consider it unfit for potable and culinary purposes, and it seems dangerous to the lives of those who drink it.

"We respectfully but strongly urge the necessity of filtering it before it enters the water mains, and, lastly, we are of the opinion that the intake pipe should extend above Walkerville sewers as without that precaution all other attempts to deal with the question would be contrary to the advice and opinions of sanitarians and at variance with our desire to secure for the people of Windsor a water supply second to none on the continent."

Bearing very directly on this prevalence of typhoid in Windsor is the evidence of Dr. Hoare, for seven years practising in Walkerville. It is so important that it might with advantage be inserted almost in full. That town takes water from the Detroit River above any point of sewage pollution.

The evidence states: "There has been no epidemic of typhoid, on an average only five cases of fever of any kind; can supply rates of typhoid deaths for five years. There has only been one death in this period, and the case was not contracted in Walkerville.

"We have a population of 1,000, and I consider the immunity from typhoid due to water supply being free from sewage contamination and comparatively recent system of sewers.

"Walkerville has during the last three months been free from fever except two cases. One case was typhoid on 1st of January; was a traveller; was at home only a few days at a time in Walkerville; did not consider the contagion local. The other was continued fever of two weeks' duration; if any infection, could only trace it to her having been visiting considerably in Windsor."

Dr. Casgrain, who practises largely in Sandwich, states: "I had in my practice from August till 1st of February, twenty cases. These include two cases in Sandwich, one fatal, previous to the overflow of manure, and eight or ten cases of gastro-intestinal fever subsequent to this overflow. These houses where cases occurred had all Windsor water supply. Had no cases in Walkerville."

The same answer was given by all physicians regarding the absence of cases in their practice in Walkerville. As a matter of fact, it seems that the water in the long main between Windsor and Sandwich, being the source of supply for some hours to Sandwich, the flood of manure did not reach the Sandwich pipes to the same extent as those of Windsor, but notably those east of the Michigan Central Railroad, since the water was emptied from the hydrants within a few hours of the flow of manure into the town supply.

The subject of other exciting causes seems to have occupied the attention of the Local Board of Health, as will be seen in the questions both by the chairman and by Mr Sheppard put to various witnesses. "Mr. Sheppard asked whether the seventeen cases were not mostly in one neighborhood?" Dr. Reaume.—"No." "How many west and how many east of Ouellette Ave.?" "Six west and the rest east." "The east is old Windsor. This district of east Windsor was not before this outbreak, seriously affected with typhoid."

Similarly, "In reply to Mr. Campbell, Dr. Carney stated that his cases had been dotted over the city. Mr. Campbell suggested that most cases were to the east. Dr. Carney stated that even if this were so, the presence of sewers without house drain connections would abate the malarial fever, but ought, too, to abate the typhoid if it be due to bad plumbing since the latter is largely absent."

The point is, however, definitely set at rest by the classifying of cases by streets. There were cases reported in all in forty-two localities, so far as the returns could be tabulated. They were as follows:

Ouellette	4	Tuscarora	3	Vera Place	2
Louis	4	Parent	1	Opp. E. Central	1
Robinson	1	Marentette	11	Victoria Avenue	1
Carter	2	Windsor	3	Church	3
Curry Avenue	1	Brant	1	Mercer	5
Cowan	1	Cataraque	3	Crawford House	5
Langlois	1	Erie	1	Chatham	5
Park Street	4	London	2	Elm Avenue	3
Essex House	1	Goyau	11	Caron	1
Prince Avenue	2	Pitt	1	Howard	1
Glengarry	14	McDougall	6	Market	1
Wellington	2	Assumption	3	Arthur	3
Dougall	3	Mich. R.	1	Asylum Avenue	4
Sandwich	3	Pallisser	1		

It would seem therefore that the conclusions arrived at in the summary of the Local Board were not based on any detailed study of the tables. Indeed, we

find in the minutes, Mr. Sheppard, a prominent and active member of the Board, to have moved the following resolution on March 8th, 1886:

Moved by Mr. Sheppard, seconded by Mr. Latham: "That the present water supply is deleterious and dangerous to the public health, and that the adoption of the Howatson silex patent system of filtration in connection with the waterworks is feasible and would be effective, and that resolution be sent to Council."

This does not seem to harmonize with the following evidence of the Chairman: "The Board, after examining reports carefully, as well as from their personal knowledge, unanimously expressed the opinion that if true typhoid existed at all it was of a very mild type. There is no doctor in the Board except the Medical Health Officer, who is not a member." Neither does the latter statement coincide with the view of the Medical Health Officer, who certainly cannot be considered an alarmist, when he says, "With regard to the effects of manure in the water supply, which occurred in January last, I am of the opinion that it was not healthy, and would cause to a certain extent fever of a malarial type, and might cause death."

Moreover, Mayor Mason further states in evidence, "Without a doubt the inshore pipe supplying the water, when open, has shown that the water was polluted by liquid manure retained by an embankment on the Tecumseth road."

To show how the Chairman must have misunderstood the sentiments of his Board, Dr. Bell, a member of the Council states in evidence, "The reason that the typhoid occurred in February was that the manure in the water was the predisposing cause."

There can be little doubt, however, that the essential requirement of the lay mind is, that disease must kill in order to be the real thing, and that since there was not a large percentage of deaths, and because all physicians did not use the same terms for the outbreak of fever, the fact was seized upon by the apologists for the city water, that the fever could not have been typhoid.

The report drawn up by the Local Board further particularly states: "The cases appear to be confined, to a large extent, to one thickly populated part of Windsor." The point made to the extent that it is in accordance with the tabulated statement of cases as given by streets is a most interesting one, and taken in connection with the relative freedom of the Sandwich supply from the flood of manure, is perhaps as perfect an illustration as could be possible of the exactly opposite fact to the conclusions contained in the report of the Local Board as to causation.

As stated in evidence, Windsor pumps 2,000,000 daily. For some six hours, according to the Chairman of the Water Commission, the flow of liquid manure continued. Assuming that the pipes had previously been filled with the average water of the river, the result would be that the filthy water would be in the pipes nearest the intake first, and remain there the longest, since when spreading to other parts of the system the blowing out of the hydrants would have been going on. If this district were thickly populated, a proportionately large amount of manure-laden water would have been used, and its presence would be felt over a large number of days. In summarizing the cases by streets, there is noticed an especially large number of cases on Glengarry street, 15; in Goyau street, 11; and other high figures as those of McDougall, 6, and Assumption, 5.

In subsequently examining the map of Windsor, we were surprised to find that these are the streets which first received their supply from the main which passes up Langlois street, from the pumping well, thence along Wyandotte street.

They are well inhabited streets, but as stated by Dr. Carney, they are not the newest streets, and while all use city water, comparatively few have house-plumbing and house sewers. To complete the illustration, we have found that the streets to the west of the Michigan Central Railroad show few cases of fever. This is explained naturally by the fact that the Sandwich main is carried by a long detour southward, owing to the deep cutting, in order to pass across the track. Thus this part of the city is, like Sandwich, a long way away from the pumping station, and the presence of the manure in the pipes was therefore but little noticed.

There can be no doubt, therefore, as to the conclusive evidence from every known source of exact information, that the explosive outbreak of fever was caused, like all other epidemic outbursts of typhoid have been shown to be directly by polluted water, and that its immediate date of causation is absolutely and definitely fixed, in keeping with the average period of incubation of typhoid, by the flood of liquid manure on the 25th day of January.

However just and proper, therefore, it is for the Local Board of Health to continue to carry out what is stated in the concluding sentence of its report, viz.: "The Board therefore is now turning its attention more particularly to endeavoring to better the unsanitary conditions which appear to be a large factor in the case, it is clear that the conclusion arrived at is unfortunate, since it makes the Board to whom, under the statute is specially delegated the duty of calling attention to causes of disease, to appear before the 10,000 citizens of Windsor as neglecting absolutely by a single recommendation in the report to direct public attention to the plain and obvious cause of the disaster which your committee has been called upon to investigate. Your committee, therefore, without further dealing with the causes of the epidemic, desires to refer to the remedy or remedies which, from the facts collected from a study of cases in the recent outbreak, from the sworn evidence of seventeen physicians, city officials, and prominent citizens, and from the experimental evidence and analysis by officers of your Board, are demanded for the contaminated public supply of the city of Windsor.

From the evidence of the several persons sworn your committee gathers the following statistics:

J. A. H. Campbell, Chairman Local Board of Health, gave as his opinion that the cases of typhoid are not more than could be expected in a population of 10,000, and is of opinion that any prevalence of fever was due to filthy premises.

Maxfield Sheppard, Member of Local Board of Health: "My view is that the city water supply is at most times very impure; also, my impression therefore was that by extending the intake further out than it now is and introducing some thorough system of filtration, perhaps the greatest measure of relief would be obtained. Of course the results of filtration could be equally well applied above Walkerville."

J. A. Ashbaugh, M.D., Secretary Medical Association:

"There has been much dissussion with regard to removing the intake; but if they could avoid Walkerville sewage, moving the intake and then filtering, we ought to get good water if the filter is good. We have had simply mud water lately."

C. W. Hoare, M.D., M.H.O., of Walkerville:

"I consider the outbreak of typhoid due to the sewage of Walkerville reaching the Windsor intake pipe.

"Walkerville sewage is therefore in my opinion a permanent source of danger to Windsor if it gets into the water supply, which danger can be aggra-

vated at any time by typhoid, cholera, diarrhœa or dysentery, being present in Walkerville

"As a medical health officer, and according to the views of sanitarians, I am of opinion that safety to the Windsor water supply can readily be obtained by going to a point above Walkerville which will be free from sewage contamination."

HENRY RAYMOND CASGRAIN, M.D., Chairman of the Board of Water Commissioners:

"Since January, 1896, the water supply has been bad, but notably so since the flood at the beginning of February.

"My idea of a remedy is to extend the pipe into the river and apply filters. I do not base this opinion as to freedom from pollution at 500 feet from actual experiments. In case the supply were taken from Lake St. Clair, it is my opinion that owing to mud, etc., filtration would equally be necessary."

E. W. S. BAUER, Esq., Member of Water Commission:

"Have heard statement of Dr. Casgrain, as to duties of Water Commission, and agree therewith; also to his statement with regard to flood and impurity from manure. I had a conversation with Dr. Dwyer, a diver, about extending pipe, and he stated that if we extended out into what he called 'blue water,' that we would have the very best of water. I am also of this opinion, but not from personal knowledge."

J. O. REAUME, M.D., M.H.O., of Sandwich East:

"I am inclined to think we are liable to an outbreak of typhoid, under present conditions of our water supply, at any time. So far as I have studied the question, I have come to the conclusion that filtration of the water is necessary."

FORREST F. BELL, M.D., Alderman:

"The reason that the typhoid occurred in February was that the manure in the water was the predisposing cause.

"I think the idea that we are going to filter out typhoid germs is a fraud, and that even though the theory that a patent filter will filter the germs for a time is true, they soon get filthy, and the germs will be no better than a sedimentary bed."

JOHN COVENTRY, M.D., Mayor and ex-Medical Health Officer:

"The water supply from its adoption to the present time has always been contaminated by the material emptied into the river three-quarters of a mile of the intake pipe.

"But the most serious contamination of all is, I consider, the Walkerville sewage; and water contaminated by it, whether unfiltered or filtered, supplied to the inhabitants, is in my opinion a most dangerous water supply."

Mr. BARTLETT, Police Magistrate, made a statement, not on oath, "that he thought going above the sewer would remove all the difficulty from sewage, and thought it could be easily done at a cost of $30,000 to $40,000."

R. LAMBERT, M.D., present Medical Health Officer:

"With regard to the effects of manure in the water supply which occurred in January last, I am of the opinion that it was not healthy, and would cause to a certain extent, fever of a malarial type, and might cause death.

"At the time of the outbreak I stated to the mayor that I thought that if the intake pipe were carried out 200 to 300 feet more than it is now, that it would remedy anything that might happen hereafter.

R. Carney, M.D., ex-Chairman of Local Board of Health:

"I ascribe the disappearance of malaria to the surface drainage; and the appearance and increase of gastro-intestinal fever to the pollution of our water supply with animal excreta, as well as vegetable." As chairman of the Local Board of Health I have at different times had a conference with the water commissioners, based solely on this ground and we suggested that they should take such steps as would remedy the pollution, leaving it to their own judgement the scheme to be adopted.

John Davis, Esq., ex-Chief Inspector of Distillaries for Canada:

"My opinion is that the public safety will best be consulted by going above Walkerville sewage, and that extension of pipe in its present point will not remove danger of pollution.

D. W. Mason, Mayor of Windsor:

"Without a doubt the intake pipe supplying the water, when open, has shown that the water was polluted by "liquid manure"

"I feel that the present steps that are being taken by the Water Commissioners for extending the intake pipe 500 feet in all would bring us to what is known as the grand body of water, and thereby abate any danger of pollution.

W. Norman, C.E., City Engineer:

Regardless of the cost, I would prefer taking the city supply from above Walkerville, moving the pumping plant all up there."

J. H. Smith, L.D.S., ex-Water Commissioner:

"I am of opinion now, that so far as sentiment goes, and so far as the name that has been given to the city of being satisfied to take its public supply below Walkerville sewer is concerned, it would be well worth the expenditure to the city to take the supply above the Walkerville sewer; but with the extension of the pipe 200 feet out, and a proper filter, I think Windsor would be supplied with a water practically free from danger."

"There can be no doubt that Windsor has sustained an incalculable loss financially, owing to the opinion that is entertained here and elsewhere, regarding the conditions of its public supply. As a result of this, people are afraid to come to reside in Windsor, or to invest money here, and the town could well afford to spend any ordinary amount to remove the suspicion."

John Hall, Chief Engineer of Waterworks for twenty-one years:

"There has been during all this time sources of animal pollution of the river above the supply, such as those instanced by Dr. Coventry, whose evidence I heard."

"To overcome the sentiment against the intake being below the Walkerville sewer, I think we had better take it above Walkerville."

John Bott, Mayor of Walkerville, said:

"The water of Lake St. Clair, is at present very muddy and the river Detroit, is itself in a more filthy state than is at all usual." Such a condition of lake and river might be expected after the floods which have existed lately, but ordinarily the lake St. Clair water, as supplied at Walkerville is so clear, that in the house of the witness it is always used unfiltered. The witness is obliged to to have the lake water filtered for family use at present. No fever is known to exist in town. Observes a clean streak of water in the centre of the river, of perhaps three-fourths of a mile in breadth, but it is not always to be seen, alter-

ing in appearance with various conditions of the wind. Has observed that under a strong wind, the water is kept up, that the river rises about two feet in twenty-four hours."

The extracts just given from the sworn evidence of fifteen persons out of the sixteen referring to the matter, all express practically but one opinion, as to the polluted character of the Windsor water supply, and every witness except one, including the Police Magistrate, one of the oldest residents of the city, is of the opinion that active steps must be taken to remove both the danger to the citizens, and the discredit which the suspicious character of the water has brought upon the city as a place of residence.

The opinions given as to remedy, may be said to be covered by four propositions.

1st. The maintenance of the pumping station in its present position, and the extension of the pipe to a distance of 500 feet from the shore.

2nd. The maintenance of the pumping station as at present, the extension of the pipe 500 feet, and the establishment of a filtering plant on the shore.

3rd. The changing of the position of the intake, to some point in Walkerville, above the sewer outlet, to a point in the river unaffected by the Walkerville sewage.

4th. The changing of the position of the intake, to some point in Walkerville above the sewer outlet, to a point in the river unaffected by the Walkerville sewage, with the addition of filtration to remove suspended mineral and vegetable impurities, which are often of an excessive and disagreeable character.

The extracts already given, indicate that there is but one view of the needs of the city, and that is an uncontaminated supply; hence your committee has nothing more to do than to determine which of the several propositions will most perfectly comply with the views so generally expressed by the witnesses, who from their several positions must be considered the best fitted to express correct views on the situation, and to speak for the people as a whole.

With regard to the first proposition, viz., the simple carrying of the intake pipe out 500 feet into what Mayor Mason characterizes as the "grand flow" of the water, it may be said that there can be little doubt, but that the nearer the centre of the current of the river, the less will be the deposits in the stream, and the further from shore pollution.

As has been, however, abundantly shown in the history of all rivers, and likewise in the Detroit river, there is no certainty of any point of the channel being at all times free from the effects of changing currents, caused notably by the changing surface levels, due to piling up of water under the influence of a wind often blowing one or more days from the same quarter. Changes in the great lakes of four and five feet of level have often been noted.

But the experiments already given both by Mr. Davis, and by Mr. Mackenzie, indicate that definite pollution does extend beyond the present intake, and the following results of bacteriological analysis of the samples of water taken by myself on the 14th of April last, in company with Mr. Hall, Chief Engineer and Mr. Reid, ex-Commissioner and made by Mr. Mackenzie, show conclusively the presence of micro-organisms at a time, days after the snow had disappeared from the lands along the river, to an extent quite incompatible with the safe use of the river water in its raw and unfiltered condition.

These samples taken within an hour of one another, were at once packed in ice, and expressed to the laboratory, and plate cultures made within nine hours from time of taking. They arrived there at a temperature of three degrees above

freezing, so that they maybe said to have very closely represented the exact number of bacteria present at the moment of taking.

In the three colums are given the source of sample, the number of bacteria per one cubic centimetre of water, and the presence or absence of bacillus coli communis, the micro-organism always present in sewage and in manure pollution :

Source.	Bacteria per cubic cenimetre.	Bacillus coli communis.
Askin's Point, about 200 feet from shore	14,000	Absent.
Walkerville intake	13,300	Absent.
Walkerville sewer, 250 feet out and 200 feet below	23,164	Absent.
Windsor intake, 500 feet from shore	21,000	Absent.
Windsor intake, 250 feet from shore	29,874	Numerous.
Windsor intake, 115 feet from shore	58,100	Numerous.

For the reasons already given and referred to by Mayor Bott, and Dr. Lambert in evidence, regarding the changing character of the currents, and the river pollution, too much importance must not be attached to a single series of analysis ; but this much is fairly concluded from the figures, viz., that at a time when lake St. Clair is receiving pollution from every side, and is relatively at its worst, it is relatively notably better as regards bacteria present, as shown by the samples taken nearest it, than the river samples taken at Windsor intake, even the one taken 500 feet from off the shore. Thus Askin's point is fifty per cent. better than 500 feet from shore opposite the present intake.

They similarly show that while Walkerville water was getting no sewage, as shown by B. coli. Windsor supply has numerous colonies of B. coli, both at the inshore and outer intakes.

The supposed point at all times of the "grand flow" at 500 feet, as believed by Mayor Mason and the diver Dr. Dwyer, is therefore shown to be mythical and not based upon exact knowledge, since 21,000 bacteria per c.c. were found present at that point

We are therefore driven to set aside the first proposition of simply extending the intake, as a means of securing at all times a safe supply of water.

The second proposition is the same with addition of a filtering plant. With regard to the efficiency of any filter to remove at all times, dangerous germs from sewage polluted water much has been said and written ; but with the classical illustrations during 1892, of the sand bed filters of Altona, of the most approved construction, allowing for a few days in cold weather, cholera germs from Hamburg sewage water to pass through, owing to the bed being overtaxed, a part of the bed having been frozen on the surface, we see how even the best management occasionally fails ; while the Tees epidemic of typhoid, reported upon in two large volumes by the local government board of Great Britain in 1892, shows that the sand filters managed by a water company, were quite defective in protecting against a flood of sewage, washed down during a week of heavy rains. Manifestly therefore while filter plants can do very much as shown in Berlin, London and elsewhere, to improve waters polluted with sewage, your committee cannot for a moment admit the practical wisdom of Windsor, attempting to filter out sewage germs from so near a source as 3,000 feet, (even by sand filters,) when the necessity therefor and the danger therefrom, can be wholly avoided by going above Walkerville, while they have yet to learn that any kind of mechanical filters can do the work more perfectly.

We thus naturally are forced to the conclusion, of most of the witnesses who gave evidence, that the carrying of a pipe above Walkerville sewage is alone a satisfactory method of dealing with the pollution. This it will be remembered, is the basis of the agreement between Windsor and Walkerville, in the litigation of 1893, by which the suit was ended. As a legal document, illustrating how the court and wise lawyers may sometimes prevent the waste of large amounts of money in suits over questions of facts not to be altered by years of litigation your committee gives in full, the consent minutes in the case of Regina *v.* Walkerville.

CONSENT MINUTES.

REGINA *v.* WALKERVILLE:—It is agreed between the parties that the questions in difference shall be settled between the parties in the following manner:

1. An iron intake pipe of not less than thirty inches in diameter shall be extended not less than 400 feet in a northerly direction into the Detroit river from Askin's point, thence along the highway in a westerly direction to Walkerville crossing the present Walkerville intake pipe and thence along the highway; the pipe reduced to twenty-seven inches in diameter to the Windsor waterworks from the time that it crosses the Walkerville system, such pipe to be of first-class material well finished and laid, the whole material and work to be at a cost not less than $55,000 and not more than $65,000 to be finished at the cost of Windsor and to the satisfaction of the city engineer, for the time being, of the City of Toronto, in case the parties differ.

2 Walkerville shall contribute on the completion of such work so certified as aforesaid in the proportion of one-tenth cost thereof as above specified.

3. The said pipe shall be jointly used by Windsor and Walkerville in the future as the means of supplying water to both of the said municipalities and nothing shall be done by either of the said municipalities detrimental to the user by the other of such water not to interfere with any arrangements which may be made by the Water Commissioners of Windsor with Sandwich.

4. In case of any breakage or damage arising in the said pipe between the intake and the crossing of the Walkerville waterworks system the same is to be duly and properly repaired by Windsor to the satisfaction of the engineer aforesaid of which repair Walkerville is to pay one-tenth.

5. Both parties are to facilitate Windsor in procuring such legislation as may be needed to effectuate this agreement to bear the expenses thereof in proportion aforesaid.

(Sgd.) By Counsel.

22nd September, 1893.

Settlement in terms of consent minutes annexed hereto judgment accordingly.

It has already been stated why the order of the court, was not carried out in 1893, owing to the courts having quashed a by-law of the Windsor Council.

As stated by Dr. Hoare, M.H.O., of Walkerville, as well as one as one of the gentlemen interested in the Walkerville waterworks, that town is still quite willing to carry out its part of the agreement.

The fourth proposition is, that in addition to carrying a pipe above Walkerville, a filtration plant be in addition established there, by which both towns can be supplied with filtered water.

As to the necessity of this, we have this in Dr. Hoare's evidence. Mr. Sheppard asked if he thought the service would be sufficient without a filter? Dr. Hoare believed that so far as typhoid is concerned, his experience taught him that it would.

In as much as the question of filtration adds additional expense, the point made is important. Your committee, however would refer you to the evidence of Mayor Bott, of Walkerville, already quoted, that he is, "obliged to have the lake water filtered for family use at present," and to the great dissatisfaction which from many quarters, as at Hamilton, Toronto, Detroit, Cleveland, etc., is expressed at the use of the water which becomes turbid with every storm, and remains so for several days. Detroit, which fortunately is in a position to get its water nearer the river current, has already adopted sedimenting basins, so your committee is informed, while in the recent report of the eminent English Engineer, Mansergh, it is laid down as a *sine qua non* to the use of Lake Ontario, that Toronto put in sedimenting tanks and filter beds. The benefits to be deriv-

ed from filtration in such cases is two-fold; First, sanitary by removing such bacterial pollution as that shown in the report on the samples taken at Askin's point and the Walkerville intake; and second, an economic one, by preventing the filling of water mains with mud, thereby reducing their calibre and endangering their tightness as seen in the rising of the Toronto pipe from this cause; and the still more important one of preventing the wear of pumping machinery and engines in the city, and of house taps.

As an illustration of what this pollution means, the following amounts of solid matter were found in samples A. B. C., taken by Engineer Hall from the Detroit river, April 11.:

Analysis of Samples of Water from Windsor. In parts per million.

——	A.	B.	C.
Free Ammonia	.....	0.011	0.011
Albumenoid ammonia	0.124	0.124	0.124
Nitrogen as nitrates and nitrites	0.223	0.221	0.221
Chlorine as chlorides	3.0	3.0	3.0
Total solids	180.0	178.	180.0

Calculated for four million gallons of water, it would mean that with 180 parts per million there would be nearly two tons of mineral and organic matter pumped into the Windsor pipes every day.

Manifestly, therefore, it is advisable both from the sanitary and economic standpoints, to have effective filtration added to the scheme for taking the common supply of Windsor and Walkerville, above the point of pollution.

Your committee therefore in conclusion, reviewing the history of the Windsor waterworks, since its installation, but especially since 1887; regarding the polluted state of the water, as shown by numerous analyses during the last six years; recognizing the force of the opinions expressed regarding the pollutions in the pamphlet, "Information for the Ratepayers", issued and signed by the Water Commissioners, urging the people to vote money for the pipe to Askin's point, issued in 1893; but especially in view of all the facts which have been brought out in the recent investigation by the Local Board, and in the sworn evidence of 17 witnesses, relating to the recent typhoid epidemic, and its direct connection with polluted public drinking water, begs leave to recommend that the Board under the powers vested in it, under sec. 3 cap. 49, Public Health Act, 1895, do instruct the Councils of Windsor and Walkerville, to jointly take immediate action to establish the intake of their common water supply at a point in the Detroit River, well above the pollution of the river by Walkerville sewage; and that this action be demanded of Windsor to remove the danger from the pollution of her present source, and equally of Walkerville, in order that she be relieved of the present necessity of removing her sewage outfall from the river, and of disposing of her sewage in such other manner as might be designated by this Board; also, that it is strongly advised that for reasons already advanced, the supply be filtered by such means as may be approved of.

All of which is respectfully submitted.

J. D. MACDONALD,
CHAIRMAN.

PETER H. BRYCE.
E. E. KITCHEN.
HARRY E. VAUX.

PART III.

BELLEVILLE.

Report of Medical Health Officer.

Belleville, Ont., November 26, 1895.

To the Secretary Provincial Board of Health :

Sir,—I herewith present my report for the City of Belleville, for the year of 1895. The sanitary state of the city has very much improved during the past year, a house to house inspection was made by the sanitary inspector and his assistants, and all yards, cess pools and water closets cleaned and disinfected. There has been fifteen cases of typhoid, five cases of scarlet fever and mild form of measles during the past month but not one single death from either scarlet fever or measles nor has there been during the year a single case of diphtheria in the city. The typhoid fever cases in many instances were contracted from well water owing, in my opinion, to the lowness and want of rain. I ordered some closed up, indeed I think it time that all wells in cities where a city supply of water can be obtained should be closed.

After years of waiting our city fathers have woke up to the necessity of drainage and this year have completed two very important ones. I hope soon to see the whole city thoroughly drained and then with plenty of good water the mortality of the city will become the lowest in the Dominion.

R. TRACY,
M. H. O.

BRANTFORD.

Report of Medical Health Officer.

The Chairman and Members of the Brantford Board of Health :

Gentlemen,—I have the honor to present my report on the sanitary condition of Brantford for the year ending October 31st, 1895.

Mortuary Statistics.

The number of deaths in the city during the year was 255, making the death rate 15.56 per thousand in a population of 16.332.

The death rate in 1894 was 18.03. In 1893 it was 13.83 and in 1892 it was 14.03.

The causes of death were as follows :—

Consumption	24
Cholera Infantum and Diarrhœal affections	22
Typhoid Fever	16
Diphtheria and Croup	15
All other causes	178

Fifty were under one year of age ; sixty-nine under five years ; sixty were over sixty years and twenty-three over eighty years of age.

Typhoid Fever.

There were sixteen deaths from Typhoid fever during the sanitary year, four in November and December, 1894, and twelve during the outbreak this year up to November 1st. The whole number of fever cases reported, including very many however which were extremely mild and brief, was 247.

Compared with recent years we had,

In 1887	average per year	95 cases	10 deaths.
1888	"	"	"
1889	"	"	"
1890	"	"	"
1891	"	"	"
1892	"	55 "	2 "
1893	"	49 "	4 "
1894	"	52 "	3 "
1895	"	247 "	16 "

This wide spread outbreak of Typhoid fever, rivalling in fatality that which prevailed in 1887 and previous years, occurring after several years of comparative immunity was the cause of much anxiety and alarm.

As outbreaks of Typhoid fever are most commonly due to contaminated water either used directly as drinking water or indirectly by means of a contaminated milk supply, the condition of our water supplies became at once a matter of the greatest concern.

These supplies were from two principal sources, the public water supply or city water, supplying over one-half of the population, and private wells, mostly surface wells, supplying the remainder. The idea became prevalent amongst many that contamination of the city water was the cause of the outbreak of fever, and very many families discontinued the use of city water and resorted again to private wells.

Under these circumstances it was a matter of first importance to have a thorough investigation to ascertain the actual facts in relation to the epidemic, and especially to discover whether either or both of our sources of water supply were impure or responsible for it. This investigation was obviously more important as to city water than as to wells, because in the one case a remedy for contamination was possible in the other it was not possible.

We owe the greatest possible thanks to the Provincial Board of Health for the prompt, earnest and efficient way in which they came to our assistance in the investigation, with the invaluable personal aid of the Secretary, Dr. Bryce, and the Bacteriologist and Analyst, Mr. J. J. McKenzie.

The investigation involved on the one hand an inspection of all premises in which fever was reputed to exist to ascertain all the facts bearing on each case, especially the source of water supply, city or well or both, the condition of the wells and their surroundings in relation to contamination, and the source of the milk supply; also an inspection of dairies supplying milk to the city as to their sanitary condition, particularly as to their water supply; also an inspection of everything pertaining to the public water supply, as to possible sources of contamination.

It involved on the other hand chemical analysis and complete bacteriological examinations of many samples of city water and of the various waters of the river, canal and Dead Creek, having a relation to the public water supply. Also bacteriological examinations of various private wells especially of those where fatal or serious cases of fever has occurred.

I have tabulated some of the results of this investigation.

The first table shows the whole number of fever cases reported during the year ending October 31st, and the number using city water and well, in each Ward. Ward No 1 is divided into north and south by the river, so as to show West Brantford separately. Ward No. 2 is divided by the railway into north and south, to show Terrace Hill separately, and Ward No. 5 is divided by the canal into north and south to show Eagle Place separately.

Table 1.—Fever cases, water used.

Ward.	Population.	City water takers.	Wells used, 1 to 5.	Fevers reported.	Deaths.	City water used.	Wells used.	Both.
1 N	2,211	163	18	18	1	8	9	1
1 S	1,371	26	248	11	.....	.....	11	.....
2 N	1,126	86	139	56	3	16	33	7
2 S	2,340	365	103	37	4	13	22	2
3	3,521	602	102	66	4	25	34	7
4	2,817	138	425	35	1	5	28	2
5 N	1,433	177	109	15	1	2	11	2
5 S	1,513	26	276	9	2	.....	9	.....
	16,332	1,699	1,565	247	16	69	157	21

1 South is West Brantford. 2 North is Terrace Hill. 5 South is Eagle Place.

Table 2.—Deaths from Typhoid Fever, water used.

No.	Died.	Name.	Age.	Street	Water used.
385	November 1, 1894	I. R	53	169 William	Well.
381	" 9, 1894	T. O	25	197 William	"
4	" 19, 1894	W. P. R	26	Arthur	"
10½	December 5, 1894	A. M. J	22	Eagle Place	"
66	July 26, 1895	M. E. W	39	34 Bridge	"
65	August 25, 1895	I. T	18	7 Joseph	"
77	July 30, 1895	B. R	18	Park ave	"
106	August 28, 1895	T. H	35	Eagle Place	"
79	" 8, 1895	M. J. B	32	40 Nelson	"
97	September 3, 1895	I. M	25	Colborne	"
234	October 15, 1895	F. C	19	Dufferin ave	"
159	" 20, 1895	R. P	56	Terrace Hill	"
213	" 19, 1895	B. D	18	44 King	City.
224	" 19, 1895	E. N	10	Terrace Hill	Well.
241	" 23, 1895	I. S	16	31 Niagara	"
227	" 20, 1895	G. B	20	William	"

No. 97, I. M., in the country two weeks just before illness. No. 159, R. P., refused to use city water. Since writing this table have been told that B. D. had malignant diphtheria after typhoid fever.

Table 3.—Showing Milk Supply of Fever Cases.

Milkman.	No. of customers.	No. of fever cases.	No. using city water.	Per cent. of fever cases.
Foulds, J	309	29	12	9
Bowers Bros	135	15	5	11
Rolfson	132	10	2	8
Whitham	119	7		7
Beel	119	42	11	35
Spencer	114	8	2	7
Perteus	124	13	2	10
Dunsdon	103	11	5	11
Snider	82	5	2	6
Passmore	100	2		2
McEwan	99	12		12
James	91	9	1	10
Berry	92	8		9
Willis	88	23	6	25
Frankland	65	8		12
Howard	76	11	4	14
Birkett	75	5	1	7
Cuff	60	2		3
Patten	17	10	6	59
Lee	13	1		
Cudmore	12			
Greenwood		9	3	
	2,025	240	62	

A few used their own cows.

Table two shows that of the 247 cases of fever reported, 69 were reported as users of city water.

Table three shows the source of milk supply of 62 of these cases, of these 62 city water drinkers, 23 had their milk from only three milkmen, and these three had 75 cases of fever amongst their 224 customers. Fifty-one of these city water drinkers had their milk from eight milkmen, who had 152 fever cases amongst their 971 customers.

It has thus been shown that of the sixteen fatal cases of Typhoid fever occurring in one year fifteen were habitual users of well water, from bad and doubtful wells ; that of the 247 cases reported, sixty-nine were users of city water, and 176 used well water [twenty-one of them also used city water]. Of the 69 users of city water the source of milk supply of 62 is given in table three, where it is seen that the milkmen supplying them were a comparatively small number having amongst their customers a very large majority of the fever cases. Three milkmen alone having 23 of the 62 cases. Allowing for an uncertain number of cases contracting fever neither by the agency of water or milk but by actual contact with patients, it would be seen that all the cases occurring in Brantford are reasonably accounted for.

Bacteria prapagate with extraordinary facility in milk so that a trifling quantity of impure water used in rinsing vessels may be as dangerous as drinking the impure water directly. The wells in the country as well as in town have been unusually bad this year causing much fever in the villages, and the wells of the dairymen have some of them been exceptionally impure. Whether impure water is drunk directly from a private well in the city or taken indirectly by means of milk from a bad well in the country the result may be the same.

It is remarkable that in Eagle Place and also in West Brantford, in both of which districts a considerable amount of fever occurs, two in Eagle Place being fatal, no city water was used at all amongst any of the cases. It is also remarkable that neither in the Ladies College, the Institute for the Blind, nor in any other public institutions where city water is exclusively used has there been a solitary case of fever though the inmates were in large proportion to the ages most susceptible to fever.

In the small villages and amongst the farmers in the county, fever has prevailed in a much greater rate than even in Brantford. No public water supply caused that. *Per contra* in some of our large cities where private wells are almost unknown, and where their public supply has been known to be inferior, no serious outbreak of fever has occurred. Obviously the reason is that though not pure, their waters have been far better than that of wells referred to.

Having regard to all the facts collected and to the various considerations referred to the conclusion seems irresistible without resorting to any bacteriological examination or chemical analysis, that our city water is in no respect to be regarded as responsible for the outbreak of fever in Brantford.

Such examinations have however been made in the most thorough manner by the most competent authority, and have settled conclusively that there have been no impurities in the city water which could be the cause of fever,

In regard to chemical analysis I need hardly repeat my published remarks in my report to the water commissioners, in *re* Dr. Bissell's report, in which I pointed out that all the chemical analysis ever made by any persons from 1885 to 1895 were substantially the same, that there has been no change in the chemical constitution of the water and that therefore such chemical constitution can have nothing to do with our recent epidemic, no matter what opinions may have been expressed about it.

As to the bacteriological examinations, a few were made for the Provincial Board of Health in September by Mr. McKenzie of the University of Toronto, and shortly after seventeen samples were examined by Dr. Bissell, of Buffalo. To these examinations I have already referred. Early in November, examinations of forty-eight samples were made by Mr. McKenzie for the Provincial Board of Health, his report will go to that Board, but he has sent me a copy of the examinations which I annex hereto by permission :—

1. Samples of city water thirty-two from private wells, mostly where fever has been ; two from the river ; two from the canal and one from Dead Creek.

2. Other samples I have sent to Mr. McKenzie as to which he has not yet reported.

I trust the public will carefully examine the report of these examinations. I can at present only make two or three remarks upon them.

1. A few of the private wells gave fairly good samples with bacteria ranging from 190 to 1,000. comparatively harmless in character, the driven wells generally much better than the pit wells.

2. A large number of private wells show extremely impure samples, pernicious bacteria, ranging from 1,000 to 4,000, and in two or three instances much above that.

3. The eleven samples of city water were in the highest degree satisfactory, bacteria from 40 to 250, averaging 107, harmless in character.

4. River at Dickey's—2,000 ; at Wilkes' Dam—2,560.

5. Canal—1,350, 1,860, two samples.

6. Dead Creek—3,150.

It will be observed that samples examined by Dr. Bissell, in September, showed the river at Wilkes Dam at 1,060, compared with Mr. McKenzie's sample in November at 2,560; and Dead Creek by Bissell in September gave 1,420, and by McKenzie in November gave 3,150.

The fact that in November owing to recent rains the river and Dead Creek were dirtier than in September explains that difference, and the fact that in November the ground water was high and the filtering galleries were not sucking from Dead Creek, as they were in September, satisfactorily accounts for the other.

It is plain that the purity of the city water has at times been sensibly impaired by filtration from Dead Creek, and although it may be shown that this has had nothing to do with causing the epidemic of fever, it has yet done much harm by causing hundreds to avoid the city water and revert to wells, many cases of fever we know to have been thus caused; for example No. 159 in table 2 used city water, but when the fever began and doubts were thrown upon it, he refused to use it and thereafter used water from a well which is shown by McKenzie's report to have had 21,000 bacteria per cubic centimetre, and undoubted sewage contamination, the result was death

I have always urged the necessity of abolishing the Creek. Dr. Bryce although satisfied that fever was not due to it, has in his report recommended it to be abolished, and I am glad to say that by the order of the Commissioners the work is being done under the approval of the Melical Health Officer. About 700 feet in length after being pumped out have been already thoroughly cleaned down to the gravel. The work is to be completed in the spring. Thousands of loads of refuse have been taken out, much of it probably harmless, but some of it extremely offensive. That this objectionable feature of the waterworks system is being abolished and all risks of contamination from that source removed should be a matter of the greatest satisfaction.

Any and all other probable sources of the slighest contamination of our water supply must be jealously guarded against, so as to place it entirely above suspicion, and to secure for it universal confidence.

This being done the public will be less reluctant to abandon private wells, the difficulty in carrying out the recommendations of the Provincial Board of Health in that respect, will be lessened we will not be likely to be again subject to an outbreak of fever such as occurred this year.

Diphtheria and Scarlet Fever.

There were fifteen cases of Scarlet Fever reported during the year, none of which were fatal. There were seventy-one cases of Diphtheria and Croup reported, fifteen of which were fatal.

Acting under directions of this Board, I purchased for the use of any physicians desiring it an anti-toxine syringe, and have kept constantly on hand a small supply of anti-toxine, to be sold at cost. Six or seven of the city physicians have availed themselves of this convenience, using the anti-toxine only in cases of great severity. It has been used in some fifteen cases many of them in great peril and the results have been susprisingly good, only two cases in which it was used have been fatal, and they were in a hopeless condition when it was given. I trust the Board will approve of my continuing to keep a supply on hand and of allowing it free in indigent cases.

The expressed intention of the Governors of the John H. Stratford Hospital to furnish the long-required hospital provisions for cases of Scarlet Fever and Diphtheria, will I sincerely trust at last be carried out, so that we may be placed in a position to give assistance in urgent cases, and to limit the spread of those diseases.

Milk Supply.

There are at the present time thirty-one licensed milk vendors of milk. There are 672 cows, 572 at present giving in milking and yielding 2,965 quarts per diem. An average additional supply of 449 quarts daily from seventy-five cows is obtained from other dairymen supplying the vendors. It thus appears that about 750 cows are required for this service and that over 3,000 quarts are daily sold in the city. The annual cost of the milk supply of the city exceeds $50,000. I give here a table showing the results of the last milk testing. These results as will be seen are, with two or three exceptions highly satisfactory, they give a good average of 3.83 of butter fat. Those samples below 3.50 cannot be considered as up to the mark of first-class milk. It is of course not certain that the single sample examined shows the average quality of that particular supply, we only know that the sample was fairly taken from the delivery wagon.

Periodical milk testing is of great importance, securing to us, as our experience proves it has done, an average improvement of about twenty per cent. in the strength of milk representing many thousands of dollars in annual value.

All the herds have this year been examined by a veterinary surgeon and his very satisfactory report is before you. I think in addition to sanitary inspection work that there should be hereafter at least one annual inspection of all the herds by a veterinary surgeon, with a view to guarding against the developement of tuberculosis and to the peremptory elimination of all unhealthy cattle. I am convinced that many of the dairymen have been exceedingly lax in reporting affections of their cattle as required by their undertakings, and think that such laxity should no longer be tolerated.

One example within my personal knowledge will suffice to emphasize this point.

Last spring one of the dairymen had a cow which had a swelling of the jaw and appeared not to be in good health, he consulted a veterinary surgeon who declined to operate believing that the disease would return, as the cow was failing in her milk she was sold for a dollar to a butcher. The dairyman says he supposed the carcase was to be fed to hogs. The disease was plainly actinomyosis or lumpy jaw, a dangerous and contagious disease. Whether the animal was fed to hogs or to man, and if to hogs what became of the hogs I have not been able to discover. If the required legal notice had been given all this could not of have occurred. The animal would have been at once destroyed.

The danger of Typhoid Fever being propagated by milk from dairies having a bad water supply, which our experience this year has shown, calls for a more through inspection of dairy premises in future in regard to all their sanitary relations and especially in regard to their water supplies.

TABLE OF MILK TESTINGS.

December 4th and 5th, 1895.

——	Lactometer.	Butter Fat.	Source of Supply
Dec. 4th.			
James, W. R.	1,033.7	4.40	Steadman & Edmondson.
Foulds, James	33.3	3.60	Foulds, Mount Pleasant
Spencer	33.2	4.40	T. Brooks & Son.
Birkett, T.	33.6	4.00	Own Supply.
Beal	32.1	4.40	Tisdale.
Nelles, R.	33.3	4.00	T. A. Secord.
Howard	31.9	3.90	John Brittan.
Whitham	32.9	3.80	Own Supply.
J. Willis	34.7	4.80	Own Supdly.
Greenwood, R.	31.9	3.20	Own Supply.
Porteus	32.9	4.00	Own Supply.
Foulds, N. D.	32.9	5.60	Bow Park.
Bowers Bros.	32.0	3.30	Kerr.
Bowers Bros.	32.9	4.00	Crawford.
Passmore, S. K.	32.9	4.40	Own Supply.
Berry, R.	32.0	3.80	Own Supply.
Cluff, J.	33.1	4.20	Wm. Nunnick.
Dunsdon	30.2	4.00	Robert McEwan.
Dunsdon	32.6	2.80	W. D. Snider.
McEwan, A. R.	33.0	4.55	Own Supply.
Rolfson, J	32.6	5.80	Own Supply.
Dec. 5th.			
Rolfson, J.	32.6	5.80	Own Supply.
Dunsdon Bros.	31.6	3.80	W. D. Snider
Craddock	32.6	3.60	Own Supply
Foulds, N. D.	30.9	6.40	Bow Park.
Patton, John	33.17	3.15	Own Supply.
Brittan, William	32.9	4.40	Own Supply.
Cudmore, William	33.7	3.25	Own Supply.
Lee, James	32.6	3.85	Own Supply.

Average Butter Fat 3.83

Sanitary Inspection.

Besides the several hundreds of special inspections made on account of the fever epidemic, 1,030 house to house inspections have been made this year.

Two hundred and eighty-six complaints entered at the health office have been investigated and for the most part satisfactorily disposed of. There were sixteen prosecutions before the Police Magistrate, in all of which convictions were obtained. One was fined $2.00 and costs, five were required to pay $3.00 costs, and ten were discharged without costs on complying with the requirements of the inspector.

I conclude this report from which I am obliged to omit reference owing to its length, to many important matters, by reminding the Board that we have not yet secured a systematic system of garbage disposal. I have for years urged the necessity for this and have shown how at a moderate expense this service might be effected.

Naturally the expenditure of money for this necessary sanitary work is not as popular as for acquiring beauty spots, or for other æsthetic undertakings. One hundred dollars may be cheerfully paid to ornament the front yard, while a request for five dollars to clean up the back yard meets with no sympathy.

I have the honor to be, gentlemen,
Your obedient servant,

(Sgd.) E. GRIFFIN,
Medical Health Officer.

Brantford, December 13th, 1895.

Since writing the above report I have received the report from Mr. McKenzie, of the results of the examination of additional samples of water sent to him. I attach this to his previous bacteriolgical report.

The samples of river and canal water show a high degree of impurity from 9,760 to 11,178 bacteria to the cubic centimetre. This is to be accounted for by the river being extremely turbid owing to a storm the night before the samples were taken.

It is highly gratifying to see that the samples of city water taken the same morning showed extreme purity, 70 to 120 bacteria to the cubic centimetre.

This forcibly illustrates the great perfection of filtration affected.

(Sgd.) E. GRIFFIN,
Medical Health Officer.

HAMILTON.

REPORT OF THE MEDICAL HEALTH OFFICER.

HAMILTON, ONT., 15th November, 1895.

To the Chairman and Members of the Local Board of Health:

GENTLEMEN,—I now present my annual report for the year ending on 31st October, 1895. The records received by me have been carefully gone over and show the following statistics.

Our citizen mortality numbers 702. Males, 345; females, 357; taking our population at 50,000 (which I consider under the mark) the death rate shows 14.4 per 1,000; 484 were buried in Hamilton cemetery, 149 in Roman Catholic cemetery and sixty-five of all creeds were taken to other family burial grounds. The total burials in Hamilton cemetery number 615, which includes eighty-nine non-residents and thirty-eight city, still-born.

The records show that fifty-seven deaths occurred at the City Hospital, twenty at St. Joseph's Hospital, three at House of Refuge and one at City Jail. Four citizens died while absent, their remains were brought back for burial. I can only find that five non-residents died in the hospitals. Their bodies were taken away for burial.

There were 229 deaths of children under five years of age, of this number 170 were under one year. The deaths recorded from diarrhœal diseases seem large, and cannot be attributed solely to excessive heat, our past summer having been very moderate in that respect. Deaths from accidents are also conspicuous.

Contagious diseases reported number 522, as follows: Diptheria, 138 cases and twenty-six deaths; scarlet fever, seventy-six cases with nine deaths, and typhoid fever, ninety-four cases and seven deaths; other infectious diseases number 214.

The mortality from diphtheria has been much less this year than last, because the number of cases have been fewer. The published reports on the efficacy of antitoxine are so conflicting that its value as a curative agent in this disease must yet remain doubtful. One of its remarkable properties seems to exist in its reducing temperature. I think, however, that the temperature in diphtheria reduces too rapidly in many instances without its aid. I have not yet been convinced of its utility.

The accompanying tables illustrate the frequency and mortality of special diseases by months and wards, and also show a comparative table for the previous eleven years. The death column shows the number of deaths of the cases reported each month without reference to time of death.

BURIAL GROUNDS.

1894-95. MONTHS.	Hamilton Cemetery.						Roman Catholic Cemetery.				Distant Burial Grounds.			Total City Mortality.			City.
	Total Burials.	Non-Residents.	Still-born.	Citizens.	Males.	Females.	Citizens.	Males.	Females.	Still-born.	Citizens.	Males.	Females.	Citizens.	Males.	Females.	Total Still-born.
November	39	5	2	32	15	17	15	5	10	0	6	2	4	53	22	31	2
December	36	8	1	27	14	13	15	7	8	0	6	5	1	48	21	22	1
January	44	9	5	30	17	13	10	7	3	1	3	1	2	43	25	18	6
February	46	6	1	39	19	20	15	8	7	0	6	3	3	60	30	30	1
March	70	10	7	53	19	34	12	5	7	0	6	2	4	71	26	45	7
April	47	4	3	40	21	19	11	8	3	0	6	2	4	57	31	26	3
May	60	7	4	49	26	23	6	3	3	0	4	3	1	59	32	27	4
June	42	5	5	32	14	18	9	5	4	0	8	5	3	49	24	25	5
July	65	12	3	50	25	25	16	9	7	1	4	0	4	70	34	36	4
August	63	6	3	54	30	24	7	2	5	2	9	6	3	70	38	32	5
September	64	11	3	50	24	26	13	6	7	0	6	1	5	69	31	38	3
October	39	6	1	32	13	19	20	13	7	0	1	0	1	53	26	27	1
Totals	615	89	38	488	237	251	149	78	71	4	65	30	35	702	345	357	42

Deaths by Wards and Months.

Months.	Hamilton Cemetery. Wards.							Totals.	Roman Catholic Cemetery. Wards.							Totals.	Distant Burial Grounds. Wards.							Totals.
	1	2	3	4	5	6	7		1	2	3	4	5	6	7		1	2	3	4	5	6	7	
November	2	2	6	7	2	3	10	32	2	0	1	1	2	7	2	15	0	0	2	1	0	0	3	6
December	1	9	4	5	0	4	4	27	0	4	1	2	3	1	4	15	1	1	0	0	1	1	2	6
January	2	3	4	5	6	7	3	30	0	2	1	1	1	2	3	10	0	0	0	0	2	0	1	3
February	4	5	8	5	4	6	7	39	4	0	2	2	2	4	1	15	1	1	1	0	0	1	2	6
March	3	8	2	5	11	10	14	53	0	2	0	2	2	5	1	12	0	0	2	1	0	0	3	4
April	1	9	5	3	6	3	13	40	0	2	3	1	1	4	0	11	0	0	2	0	0	0	4	6
May	3	3	10	7	6	6	14	49	0	0	1	2	1	2	0	6	1	1	2	0	0	0	0	4
June	1	4	4	6	3	6	8	32	1	0	1	1	0	5	1	9	0	0	1	4	1	2	0	8
July	6	7	5	7	3	11	11	50	1	2	0	3	5	2	3	16	1	1	1	0	1	0	0	4
August	4	6	6	8	6	11	13	54	2	1	0	1	0	2	1	7	0	0	3	0	2	2	2	9
September	4	4	10	4	11	4	13	50	0	0	0	5	3	3	2	13	2	1	0	1	0	1	1	6
October	2	3	8	3	0	6	10	32	1	5	1	1	3	7	2	20	0	0	0	0	0	1	0	1
	33	63	72	65	56	77	120	488	11	18	11	22	23	44	20	149	6	5	14	7	7	8	18	65

Combined totals of Wards	1	2	3	4	5	6	7	
are	50	86	97	94	88	129	158	702

Deaths north of King street ..... 469.

Deaths south of King street ..... 233.

Estimated population, 50,000. Death rate, 14.4 per 1,000.

Contagious diseases reported at Health Office, 1894-95.

Months. 1894-95.	Special Diseases.						Unreliable in Numbers.			
	Diphtheria.	Deaths.	Scarlet Fever.	Deaths.	Typhoid Fever.	Deaths.	Chicken Pox.	Measles.	Whooping Cough.	Mumps.
November	53	10	3	0	3	0	3	1	4	0
December	19	5	4	0	3	0	10	4	8	0
January	8	1	12	1	5	0	27	2	17	0
February	4	0	13	4	5	0	17	0	4	1
March	11	5	8	2	3	3	13	1	8	0
April	4	2	4	0	0	0	14	0	5	0
May	18	2	5	1	2	0	8	0	4	0
June	6	0	5	0	6	0	11	2	12	0
July	7	0	5	1	4	0	1	4	17	1
August	0	0	4	0	15	0	0	2	5	0
September	6	1	5	0	17	1	1	0	5	0
October	2	0	8	0	31	3	1	1	0	0
	138	26	76	9	94	7	106	17	89	2

Special Contagious Diseases by Wards.

—	Wards.							
	1	2	3	4	5	6	7	Totals.
Diphtheria	19	9	24	21	7	25	33	138
Scarlet fever	16	16	7	7	1	6	23	76
Typhoid fever	6	8	14	14	12	18	22	94
Totals by wards	41	33	45	42	20	49	78	308

Comparative statement of special contagious diseases for eleven years corrected to date :

Years.	Diphtheria.		Scarlet Fever.		Typhoid Fever.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1884-85	202	59	27	1	52	4
1885-86	214	67	109	2	23	2
1886-87	205	31	173	2	69	8
1887-88	163	48	173	3	127	13
1888-89	62	15	151	3	149	12
1889-90	45	6	175	6	83	6
1890-91	32	8	108	3	69	5
1891-92	20	3	135	2	79	10
1892-93	55	15	282	2	66	6
1893-95	318	69	134	2	120	6
1894-95	138	26	76	9	94	4
	1,454	347	1,543	35	933	76

The following is a summary of inspections recorded and work done under the superintendence of your Health Inspectors:

Number of inspections made	7,459
Privy vaults cleaned	1,449
Privy vaults abolished	98
Privy vaults established	35
Cesspools cleaned	17
Earth closets notified to clean	42
Sewer connections made on notice	19
Sewer connections found defective and repaired	106
Foul and offensive drains abolished	53
Stagnant water abolished	18
Dirty premises cleaned	28
Other nuisances abated	595
Houses placarded for infectious diseases	158
Houses properly fumigated	159
Scavenger work—Loads delivered at dumps	6,770
Dead animals burned at crematory—Dogs	281
" " " " Cats	237
" " " " Chickens	250
" " " " Goat	1
Lots of meat burned at crematory	14
Lots of fish burned at crematory	21
Loads of rags, etc., from the City Hospital	58
Bedding and clothing from infectious houses	13
Milk licenses issued	244
Samples collected and tested	1,396
Cow byers, dairies and shops inspected	825
Number of cows reported dirty	2
Premises reported dirty	2

All of which is respectfully submitted,

I. RYALL, M. H. O.

KINGSTON.

Report of the Medical Health Officer.

To the Chairman and Members of the Local Board of Health:

Gentlemen,—In accordance with the requirments of the Public Health Act I have the honor to submit my annual report on the sanitary condition of the City during the year ending December 31st, 1895.

Infectious and Contagious Diseases.

The record of the cases of typhoid fever show a considerable decrease in the number as compared with former years. The number of cases reported was 35. The decrease is no doubt attributable to the intake of the water supply pipe having been located out in mid-stream, where the purest water from Lake Ontario is procured. Another cause is that a large number of wells are being filled in annually, the citizens, now that cheap rates have been afforded, practically recognizing the fact that pure water is a great factor in the preservation of health and the prevention of disease.

Diphtheria.

The number of reports of this disease is larger than that of 1894. The cause, I think, may be principally ascribed to the dry season, and the large increase in the number of house water-closets emptying into the old stone drains. These sewers are simply receptacles or reservoirs for the collection and fermentation of excrement, and therefore propagate, and permit to escape into the air of the city, germs of disease. I am gratified, however, to be able to report that while the cases of diphtheria have been unusually numerous, the disease has not been of a virulent or malignant type. The percentage of deaths was small. Number of cases seventy.

Scarlet Fever.

This disease was very mild and of a sporadic character. It was not localized, but scattered in different sections of the City. Number of cases, 17 ; no deaths.

Membranous Croup.

Although the law does not require reports of this disease to be made, the Local Board of Health, in its wisdom, thought the matter of such importance that it passed a resolution instructing all medical men in the city to report the cases of membranous croup that came under their notice, so that a record of them could be kept. There were fifteen cases reported, and the death rate was very great.

Measles.

Only three cases were reported, and none proved fatal.

The Ice Supply.

It is worthy of note that our Local Board of Health, at its last meeting passed a resolution to the effect that hereafter no persons will be permitted to cut ice, no matter for what purposes, domestic or cooling, within the line laid down by the Board. The ice must be obtained from where the purest water is known to exist.

Sewage.

The disposal of sewage is a matter of great moment to the health of the city. I look forward to the time when funds will be available for the replacing of the old stone drains with tile pipes, and either the construction of an intercepting sewer along the front of the City, so that the sediment or sludge could be collected and buried, or the conveyance of the sewage through a large iron pipe into deep water, where the heavier matter would soon settle and its delterious character be gradually reduced beyond detection.

Slaughter Houses.

There are only two recognized slaughter houses in the City, and they are located at a considerable distance from any dwellings. However, for the better protection of the public health, I would recommend the establishing of an abattoir.

SAMUEL H. FEE, M.D.,
Medical Health Officer.

LONDON.

Report of Medical Health Officer.

To the Chairman and Members of the Local Board of Health :

Gentlemen,—During the year we had a death rate of 11.2, the city's population, according to the assessment returns being 34,429. "This is the lowest rate yet reached by the city and will in all likelihood be lower than that of any other city in Canada. If the deaths among the city residents alone were counted however," "the rate would be still further reduced, for it must be remembered that many come to the city to avail themselves of the treatment offered at the hospitals. For instance, seventy-five per cent of the persons treated for typhoid fever at the General Hospital were non-residents."

Ninety-nine cases of infectious diseases were reported at the health office inclusive of those sent to the City and St. Joseph's Hospitals, compared with 215 last year. Classified they were as follows : Typhoid fever, 63 ; diphtheria, 23 ; scarlet fever, 13—a marked decrease in preventable diseases compared with former years. The infectious diseases during the year were of mild types. Scarlet fever is not credited with any deaths, while typhoid fever is given as the cause of only eight, and diphtheria of three. Consumption heads the list (as it always does in temper-

ate zones) with 38 deaths; heart disease and "heart failure" (which describes nothing at all) caused 30 deaths; pneumonia, or inflammation of the lungs, comes next with 26, and 24 are accredited to old age. Paralysis caused the death of 18, and cholera infantum 16. There were 16 violent deaths, a surprisingly large number as compared with other years. Cancer caused 17; apoplexy and inflammation of the bowels, 14 each; convulsions, 11; diarrhœa, croup, tubercular-miningitis, 10 each; Bright's disease, la grippe, dropsy and bronchitis, 7 each, marasmus 6; inflammation of the brain 5; indigestion and dysentery 5 each; blood poisoning, jaundice and diabetes, 4 each; whooping cough and enteritis, 3 each; inflammation of the stomach, infantile debility, abscess, spinal meningitis, obstruction of the bowels and premature birth, 2 each; and one each from a number of other diseases.

A great deal of sanitary and other work has been done during the year. Many complaints have been received and attended to. Thirteen wells have been closed and 23 caused to be cleaned, and it was gratifying to know that the city water was gradually taking the place of dangerous wells. Many of the public schools had been inspected, and a careful inspection has been made of all the city stores where girls and women are employed, a report of which has been made to the City Council. The house to house inspection was completed on the 26th of May. The inspectors reported as follows:

Premises visited, 7,252; closets reported not clean, 1,630; yards reported not clean, 335; cess-pools reported not clean, 32. Subsequent visits were made by the assistant inspector to see that cleaning was properly done, and before the hot month of June set in the City was in good sanitary condition.

A careful inspection has also been made of meats, fruit, etc., offered for sale upon the market. The city's ice supply is still taken from the north branch of the Thames, in accordance with the regulation of the board, the water having been found upon analysis to be better than that of the cove or south branch. Ice taken from the two latter places is allowed to be sold for cooling purposes only. The very important matter of house plumbing has year by year been urged upon the attention of the City Council, but so far nothing has been done towards compelling builders and owners to put in plumbing that will not endanger the occupants. Two recent deaths in the city can be traced to no other cause than defective plumbing, and it is hoped that no further delay will be made in a matter of such vital importance to the people. A competent plumber should be appointed to see that no more of this wretched plumbing is put into dwellings.

(Signed)

T. V. HUTCHINSON,
Medical Health Officer.

OTTAWA.

Report of the Medical Health Officer for 1895.

To the Chairman and Members of the Board of Health:

Gentlemen,—I beg leave to lay before you the annual report of the Health Department for the year ending 31st October, 1895.

In so doing it may be satisfactory to know that notwithstanding the prevalence of epidemic diseases, such as diphtheria and scarlet fever, in the city during the first half of the period comprised in this report, the death rate from all causes was less than that of the previous year. The total mortality for the past year was 1,083, which with our estimated population of 52,000, gives us a death rate 20.82 per thousand; 416 of the total deaths were children of five years and under.

It is no doubt due to the incessant efforts of the registrar of this division to enforce compliance with the requirements of the law in this respect that the registered mortality, in so far as numbers are concerned, is approximately correct; but at the same time I very much regret to say

that, as records of the causes of death these statistics are misleading, and will have but little of the scientific value they should have, so long as burials are permitted without a physician's certificate as to the cause of death. It is true, no doubt, that sporadic cases of infectious diseases we must inevitably have always among us, but it appears quite evident, as recorded on table No. 4 here attached, that the death roll of these so-called preventable diseases for the past year is much larger than it should be. Admitting as a fact that these diseases, in the great majority of instances, are spread by personal infection, it is also safe to affirm that here, as elsewhere, they generally have their first causation in unsanitary conditions of the dwelling house or its immediate surroundings or both. This has been painfully exemplified in the southern and south-western sections of the city, where drainage is sadly needed, and where these diseases, especially diphtheria and scarlet fever, prevailed extensively.

That during the past year the isolation hospitals have done good work is self-evident, as indicated in table No. 2 here attached, showing the number of patients treated there during the year as well as the deaths therefrom.

The infectious diseases reported at the Health Office during the year were as follows :

	cases.
Diphtheria	287
Scarlet fever	182
Typhoid fever	195
Measles	23
Whooping cough	27
Total	713

Note.—The figures recorded here opposite the three first named diseases I believe to be about correct. I cannot, however, say as much to the others. Measles and whooping cough, I am inclined to think, in many instances are not reported.

The milk consumed in the city is supplied by about seventy-five licensed vendors from dairy farms in the surrounding country, and the fact that there was but one single complaint made at the Health Office during the past year against the article supplied, seems evidence enough that the milk supply of Ottawa is undoubtedly good.

The ice of the city for household use is taken entirely from the Ottawa river above the Chaudiere Falls, and the regulations of your Board relating thereto have, during the past year, been willingly complied with by the ice vendors of the city.

For a few years past one of the most perplexing questions to a very large number, if not the majority of the householders of this city, has been how to dispose of household refuse.

This, especially during the summer season, becomes a very serious matter in a sanitary point of view, and has been a prolific source of complaints and recriminations against the Board of Health in not organizing a proper scavenging system. There is no doubt that Ottawa has now arrived at such proportions as would urgently demand better methods than those now in use for the final disposal of such matter.

The details of the work done in the sanitary department during the past year are fully shown in the sanitary inspector's report here appended, to which I beg to refer you.

In conclusion I wish to express my satisfaction at the assistance given me by the sanitary inspector and his assistant in carrying out the work of this department, and acknowledge with pleasure the aid given by the police in the work of general sanitation.

Respectfully submitted,

10th January, 1896. A. ROBILLARD, M.D.

Table No. 1.—Showing the number of patients treated in the hospitals for contagious diseases and deaths resulting therefrom for year ending 31 October, 1895.

Diseases.	Protestant Annex.				Roman Catholic Annex.			
	Remaining from last year.	No. admitted.	No. cured.	Deaths.	Remaining from last year.	No. admitted.	No. cured.	Deaths
Diphtheria	11	111	111	11	11	199	182	28
Scarlatina	6	50	48	8	1	40	37	4
Measles	.....	2	2	.....	.....	1	1	.....
Totals	17	163	151	19	12	240	220	32

Table No. 2 —Records of the House of Bethlehem for the year ending 31 October, 1895.

——	—	Totals.
Infants in Asylum Nov. 1st, 1894	14	
" admitted during the year	222	236
Returned to parents or placed out	105	
Died during the year	118	
Remaining on Nov. 31st, 1895	13	236

Table No. 3.—Showing the death rate per thousand per annum from Zymotic diseases as compared with total death rate in the city during the past eight years.

—	Population (estimated).	Zymotic diseases.									Zymotic.		All causes.	
		Smallpox.	Measles.	Croup.	Scarlet fever.	Diphtheria.	Typhoid fever.	Puerperal fever.	Diarrhoeal diseases.	Others.	No. of deaths.	Rate per thousand.	No. of deaths.	Rate per thousand.
1887	38,000	.....	.....	..	.....	36	15	.....	150	6	207	5.23	778	20.47
1888	40,000	.....	2	2	2	62	46	.....	166	9	283	7.07	915	22.97
1889	43,000	.....	13	19	5	59	18	2	188	17	321	7.46	983	22.86
1890	44,000	.....	4	13	4	39	19	4	160	25	265	6.02	960	21.81
1891	45,000	.....	6	14	24	30	9	3	203	21	310	6.88	908	20.17
1892	46,000	.....	16	7	4	15	13	.....	.....	13	68	1.46	983	21.13
1893	48,000	.....	5	6	5	17	16	3	158	29	239	4.97	892	18.58
1894	50,000	.....	5	41	23	78	17	1	195	33	393	7.86	1,083	21.66
1895	52,000	.....	9	15	33	80	15	2	249	.....	403	7.75	1,083	20.82

NOTE.—As shown in the above table, the average death rate from all causes in Ottawa during the past ten years has been 21.68 per thousand of the population.

REPORT OF SANITARY INSPECTOR.

Health Office, City Hall,
OTTAWA, 24th December, 1895.

The Chairman and Members of the Board of Health:

GENTLEMEN,—I have the honor to submit for your consideration the annual report of the Sanitary Department for the year ending 31st October, 1896.

In presenting this, my eighth annual report, it is gratifying to be able to report marked improvements in the manner in which the contractor for the removal of night soil has carried out his work. I am also pleased to report on the satisfactory manner in which the assistant inspectors have performed their duties. In respect to the removal of garbage, the absence of any organized system leaves this part of my work in a very unsatisfactory condition; the treatment, however, of such garbage when removed to the several dumping grounds has been successful and without complaint.

Disinfection.—Two hundred and twenty-six houses were fumigated and cleansed; eighty-seven houses were placarded for infectious diseases; ninety-six cards were removed from infected houses.

NOTE.—The above include only those attended to by myself.

Plumbing Tests.—One hundred and twenty houses were tested for the discovery of defects in draining and plumbing systems.

Prosecutions.—Four proprietors of dwelling houses were summoned for contravention of the Public Health Act, and convictions secured.

In so far as the work of the Department can be put in form, the following tables show what has been done.

I am, Gentlemen,
Your obedient servant,

GEO. McNEILL,
Sanitary Inspector.

Table No. 1.—Classification of Nuisances coming under the notice of the Department during the year.

Description of Nuisances	By whom reported.					Total.
	Sanitary staff.	Tenants.	Neighbors	Owners.	Others.	
Accumulations of manure, etc., on lots	32	6	41	7	7	93
Cellars flooded and otherwise polluted	58	88	9	.....	.....	155
Drains choked and otherwise defective	37	49	4	7	.....	97
" box	5	9	.....	.....	1	15
" none	14	13	.....	3	.....	30
Dwellings unfit for habitation	5	2	1	.....	.....	8
" dirty and unwholesome	12	.....	6	2	.....	20
" sewer gas escaping into	36	87	.....	.....	.....	123
Foul yards and premises	503	.....	321	13	207	1,044
Illuminating gas escaping on streets and into dwellings	7	23	.....	1	.....	31
Privy vaults of defective construction	41	10	6	.....	.....	57
" too near dwellings	2	....	7	3	.....	12
" want of	1	1	.....	.....	.....	2
Pigs kept too near dwellings	.....	.....	5	.....	1	6
Sinks untrapped and defective	4	2	.....	.....	.....	6
" want of	1	3	.....	.....	.....	4
Soil pipes unventilated	5	3	.....	.....	.....	8
" untrapped	5	5	.....	.....	.....	10
" otherwise defective	13	9	.....	.....	.....	22
Waste pipes defective	20	12	.....	.....	.....	32
Water closets of defective construction	9	8	.....	.....	.....	17
" unventilated	4	.....	.....	.....	.....	4
Want of water for domestic purposes	.....	16	.....	.....	.....	16
Miscellaneous	4	.....	.....	.....	11	15
Totals	818	346	400	36	227	1,827

Table No. 2.—Statutory notices issued during the year.

——	To proprietors.	To tenants and others.	Written.	Verbal.	Totals.
November, 1894	38	40	25	53	78
December, "	22	13	17	16	35
January, 1895	29	75	34	70	104
February, "	20	64	21	63	84
March, "	18	21	16	23	39
April, "	20	68	18	70	88
May, "	48	194	42	200	242
June, "	60	132	61	131	192
July, "	35	77	30	82	112
August, "	55	98	48	105	153
September, "	24	87	23	88	111
October "	39	53	28	64	92
Totals	408	922	363	967	1,330

Table No. 3.—Privy vaults emptied and revenue to contractor therefrom during the year.

——	Upper Town.		Lower Town.		Total.	
	No. of privies.	Amount.	No. of privies.	Amount.	No. of privies.	Amount.
		$ c.		$ c.		$ c.
November, 1894	205	291 05	169	204 30	374	495 35
December, "	283	393 54	290	367 60	573	761 14
January, 1895	206	279 65	248	300 75	454	580 40
February, "	222	303 95	198	281 10	420	585 05
March, "	189	278 50	206	277 55	395	556 05
April, "	255	363 20	170	208 01	425	571 21
May, "	216	316 60	201	225 14	417	541 74
June, "	56	97 70	43	45 40	99	143 10
July, "	33	93 00	28	54 95	61	147 95
August, "	16	17 23	13	15 60	29	32 83
September, "	23	26 50	21	21 90	44	48 40
October, "	75	105 64	118	155 15	193	260 79
Totals	1,779	2,566 56	1,705	2,157 45	3,484	4,724 01

Table No. 4.—Location of nuisance and number on each street.

Street.	Number of nuisances.	Street.	Number of nuisances.	Street.	Number of nuisances.
Albert	25	Frank	2	Ottawa	26
Anglesea Sq	11	Florence	9	O-goode	9
Archibald	9	Flora	5	Oregon	3
Anderson	8	Gloucester	26	O'Connor	18
Ann	22	George	24	Papineau	2
Augusta	24	Gorve	2	Parliament	1
Alice	11	Gilmour	16	Portland Ave	1
Arthur	10	Head	4	Peter	6
Bay	16	Henderson	2	Primrose	2
Baird	9	Hill	14	Percy	1
Bell	4	Isabella	15	Pinard	1
Besserer	12	John	2	Pine	8
Bridge	16	James	10	Pine (N. E.)	3
Bolton	10	Kent	26	Preston	12
Boteler	23	Keefer	2	Poplar	2
Bank	37	King	35	Perkins	6
Broad	16	Lisgar	29	Queen	17
Britannia	9	LeBreton	10	Queen West	9
Balsam	11	Lewis	16	Rochester	6
Cambridge	10	Lett	9	Rideau	26
Cathcart	12	Lochiel	3	Russell Ave	2
Cartier	9	Lloyd	2	Rose	2
Crawford	7	Lyon	4	Redpath	3
Cedar	11	Lorne Ave	5	St. Andrew	29
Church	14	McGee	5	St. Joseph	3
Concession	21	McLaren	16	St. Patrick	24
Cobourg	15	Metcalfe	24	Sparks	33
Canal	10	McDonald	4	Stewart	11
Cumberland	48	McDougal	6	Sophia	3
Clarence	29	McLeod	1	Sussex	37
Cooper	17	McKay	4	Somerset	11
Creighton	7	McTaggart	5	Slater	17
Charlotte	2	Maria	16	Sherwood	6
Chapel	22	Murray	5	Spruce	5
Currier	3	Maple	3	Stanley Ave	3
College Ave	8	Marlborough	1	Theodore	17
Charles	10	Middle	8	Turner	12
Cliff	3	Mutchmor	3	Victoria	3
Daly	21	Mosgrove	2	Victoria Ave	5
Dalhousie	41	Martineau	4	Water	17
Division	37	Munro	4	Waller	13
Dufferin	7	Market (W. W.)	7	Waverly	1
Duke	26	Market (By W.)	3	Wellington	47
Elgin	14	Market Cathcart	2	Wilbrod	13
Eccles	1	Nelson	3	Willow	12
Emily	4	Nepean	8	York	10
Elm	4	Nicholas	5	Other places	186
Ellen	12	Neville	3		
Friel	16	Notre Dame	5	Total	1,827

All of which is respectfully submitted,

GEO. McNEILL,
Sanitary Inspector.

ST. CATHARINES.

Report of Chairman.

To the Mayor and Aldermen of the City of St. Catharines:

Gentlemen:—In compliance with the Act relating to Local Boards of Health, I herewith submit the annual report of your Local Board for year ending in November, 1895.

The subject matter is very brief, owing to the fact of there being nothing of any particular interest to report upon, outside of what is contained in the report, herewith submitted by your City Clerk.

We have every reason to congratulate ourselves and the citizens generally, that there has been no epidemic of disease, and the City has been and is at the present time in a good healthy state.

No extraordinary expenditure has been required.

The Sanitary Inspector has attended to his duties I believe in a satisfactory manner, very few complaints have been made to the Board, and the Inspector has always been prompt in looking after them.

The total deaths as per report of City Clerk is fourteen, I find after deducting eight for old age, two suicides, and still born ten, the death rate of the City would be 12 per 1,000.

Respectfully submitted,

SAMUEL G. DOLSON,
Chairman.

St. Catharines, Nov. 15th, 1895.

To the Chairman and Local Board of Health of the City of St. Catharines:

Gentlemen,—Herewith I have the honor to submit the annual statement of the number of deaths in the City of St. Catharines, from Nov. 15th, 1894, to Nov. 15th, 1895, and the causes thereof, also statement of the number of contagious diseases for the same period as per medical returns.

Deaths.

Disease.	Number.	Disease.	Number.
Lung disease	4	La grippe	1
Pneumonia	8	Cancer	3
Congestion of brain	4	Poisoned	1
Paralysis	7	Measles	1
Still born	10	Diarrhœa	2
General debility	2	Indigestion	4
Diabetes	1	Cholera morbus	1
Heart disease	19	Hip disease	1
Liver complaint	1	Typhoid fever	1
Injuries	3	Burned	1
Varicose ulser	1	Bright's disease	2
Apoplexy	2	Peritonitis	3
Consumption	17	Marasmus	2
Bronchitis	11	Cholera infantum	9
Inflammation of spleen	1	Inflammation of bowels	3
Epilepsy	1	Cerebritis	1
Suicide	2	Puerperal fever	1
Croup	2	Drowned	1
Meningitis	2	Dropsy	1
Gangrene	1		
Old age	8	Total	141
Convulsions	2		

Contagious Diseases.

Reported.	Number.	Deaths.	Number.
Scarlet fever	20	Measles	1
Typhoid fever	10	Typhoid fever	1
Diphtheria	3		
Measles	5		
Total	38	Total	2

I have the honor to be,

Your obedient servant,

J. ROLLISON,
Secretary.

City Clerk's Office, St. Catharines, December 3rd, 1895.

ST. THOMAS.

REPORT OF SANITARY INSPECTOR.

ST. THOMAS, 5th December, 1895.

P. H. Bryce, Esq., M.D., Secretary Provincial Board of Health:

DEAR SIR,—Complaint has often been made to me by individuals and by members of the W.C.T.U that there is no provision made for the accommodation of female employees in stores and shops in this city for necessary purposes and on that the health of many is endangered if not impaired.

I visited the various places and reported the facts to the Local Board of Health which body is anxious to improve the condition of the employees. The Board instructed me to consult the city solicitor as to the power allowed us in such cases.

The solicitor informed me that the Public Health Act gives power to regulate things that do exist but does not give power to require the construction of closets etc., where they are no already.

In most cases the owner of the property is not willing to make the necessary provision but when the owner is also the person conducting the business I found a willingness to do what is right in the matter.

The city solicitor was of the opinion that the question was one for the Inspector of Factories.

I take the liberty to bring the matter to your notice in the hope that something may be done for those who now suffer, as it is for the benefit of the public health we are working.

I am yours truly

W. J. SHAW,
Sanitary Inspector.

TORONTO.

By Charles Sheard, M.D., Medical Health Officer.*

Toronto, November 26th, 1895.

To the Chairman and Members of the Local Board of Health:

Gentlemen,—I have the honor to present the final report for the departmental year 1894 and 1895, being supplementary to the monthly statements already submitted, and a more or less complete summary of the year's work. I have in a former report referred in detail to the methods of quarantine and disinfection adopted by the Medical Health Department of the city of Toronto, which methods have been thoroughly and rigidly carried out during the past year, and in the description of which I need not here occupy space, as I have already fully dealt with them.

The character, condition and arrangement of plumbing work and drains becomes a matter of considerable interest and importance in discussing the question of the etiology of contagious diseases. It is a matter of question whether or not defective plumbing and drains can be considered as actual and exciting causes in the production of either typhoid fever or diphtheria, but, in my opinion, they can operate as predisposing causes.

As to diphtheria itself, there can be little doubt in the mind of anyone who would take a large number of cases, and carefully and thoroughly investigate the source of contagion, but that there is every reason to believe that they spread in all cases by direct contact or direct contagion: but, notwithstanding these facts, every physician knows, and every sanitarian admits, that certain constitutional and systemic states render one individual susceptible, or vulnerable, and another insusceptible, or invulnerable, to the specific virus; and, as a cause of vulnerability, sewer gas inhalation takes a potent and formidable place.

Coming to the question of plumbing and drainage, as it affects dwellings in a city having a more or less complete and thorough sewerage system, the first point raised is, what are the important points to be considered and watched in a plant so susceptible to disorders and thermal changes as house drains and plumbing are in a country like Canada where frosts are sudden and severe? Reviewing the plumbing reports of the Medical Health Department of the city of Toronto for the last two years, which include smoke tests, the weak points appear to be, first, in the drains, where the soil-pipe and drain are joined, or where the drain passes through or under the walls of dwellings. A defect frequently found upon applying the smoke test to the plumbing work and drainage systems of a dwelling is a leak at the junction of the soil-pipe with the drain. This has been brought about, in the majority of instances, by the settling of the iron soil pipe—the weight of which is considerable, in an ordinary three storey building, and especially so if it be not properly supported—and the settling of the walls of the building. This would present to one's mind the necessity for a substantial support being placed under the soil pipe and drain connection, which support ought to be of brick, stone or concrete, so arranged as to prevent settling, and also of a shape such as would effectually support the rounded bend which is commonly used at this particular point. This, together with proper hangers, would be in a measure a preventative of the accident referred to.

The next point is the best means of maintaining the integrity of a drain where it passes under or through a wall, the danger here being, of course, from the settling of the wall, which may result in the destruction of the drain pipe at that point, or its detachment at some point adjacent. In this connection a proper stone or concrete footing for the wall becomes all important, and a due regard as to the nature of the soil, as to its sandiness or springiness, must receive careful consideration. The footing to the wall must also be of such a proportion as to properly support it. The point through which the house drain passes could well be strengthened by a properly constructed arch of brickwork, or protecting the same by a stone sill set immediately above the drain, guarding the aperture for the drain in the same manner as any other aperture in the wall.

It is no very uncommon occurrence to find that while the drain has been tested, when open, with the water test, and afterwards filled in, and the smoke test applied, say a few weeks or months afterwards, defects in the drain are found which may occasion considerable surprise, and these defects may not be the result either of the settling of the wall, or of the settling of the soil pipe connections, but may occur at any point in the continuity of the drain. Assuming that the drain was carefully laid and properly inspected, the breaking of the collar of the tile pipe, or the defect in the drain, may result from the drain being improperly laid, so that the pipe is supported only at points where the collar of the pipe exists, and the weight of earth pressing

*These are excerpts only from the Annual Report which appears in printed form

upon the intervening portion being sufficient to either break the pipe or the drain connections. Of course it is understood that I am now referring to other forms of drainage than iron drains. It might be argued that the substitution of iron drains throughout would be sufficient to at once remove all possibility of such defects, but such a suggestion often cannot be adopted because of the expense incurred; and furthermore, experience may show that the iron drain is susceptible to changes from the chemical action of the sewage passing through it, and by permitting accumulations, deposits and corrosions in it which will seriously reflect upon its sanitary integrity; also in making connection in iron drains the porcelain lining of soil pipe may be easily injured.

As to the trap on the house drain, the object of the same is, of course, to prevent the sewer from being ventilated through the dwelling, and in cases where there are iron drains throughout it is argued that the main trap ceases to be a necessity. If, however, galvanized iron or tin conductor pipes run into the drain, as is customary with us, these in their turn become drain ventilators and are particularly prone to be defective at their seams and bends due either to corrosion or the influence of frost; the main trap of the drain, under such circumstances, becomes a necessary safeguard.

As to inside work, passing over the defects resulting from gross carelessness, either of workmanship or inspection, such for instance as leaving unclosed the connections or cleaning screws and hand holes, without their proper caps or coverings, the soil pipe demands particular attention. First, as to the hangers being placed directly under the collars of the soil pipe joints, and properly secured by screws to the wall, and so placed to be as little amenable as possible to the influence of frosts. The object aimed at is that of preventing traction upon the joints, which readily become imperfect and, in consequence, leaks of a serious character may occur at such points. In order to obviate the effect of the weight of the entire length of soil pipe from pressing upon the drain connection, or its vicinity, a stool of masonry work might with advantage be placed at the junction of the soil pipe to the drain.

Again, the floor flange connections of closets to drains are important, and being below the closet trap, when defects exist, may serve to ventilate the drain into the closet apartment, to overcome with a properly secured screw joint, with screw bolts and rubber packing, should in all cases be made. Very frequently, however, the joint is loosely run with cement, putty, or even mortar, where, with the working of the closet and the settling of the building, the joint speedily becomes defective. A point which is often overlooked, in the construction of water closets, is the proper position and arrangement of the seats, which, by being too far forward or too high up in relation to the bowl, permit of the urine escaping on the safe (or lead covering of the floor immediately underneath the closet); the safe thus becoming covered with urine is speedily corroded and becomes extremely foul and offensive. We might also remark that the space under the closets is not intended as a storeroom for every objectionable substance which a house may contain, but it is intended to be kept with the same care as the closet itself, and in order to avoid depositing an accumulation of refuse, and the neglect which follows such deposit, a finished closet should be supplied with an apron, the work below being open for ventilation and inspection.

In connection with the ventilation of the closet, special mention is to be made of the necessity for a local vent from underneath the seat of the closet, and into the kitchen chimney flue, or other flue constantly in use. The local vent may be of galvanized iron, the seams and connections of which should be carefully and properly made.

Diphtheria.

A careful study of the subject of diphtheria strengthens the conviction that one of the most important points in connection with the disease is the avoidance of the danger of infection. With this object in view, it becomes a matter of importance to diagnose the disease at the earliest possible moment in order that prompt measures of importance may be adopted, and also it is important to determine when quarantine regulations may, with safety, be discontinued.

Having this object in view, the Medical Health Department of the city has, since the beginning of February last, made arrangements for the bacteriological examination of all cases of diphtheria, whether doubtful or determined. Sterilized swabs are supplied to practitioners, which, on being returned to the Medical Health Department, are examined microscopically and cultures made therefrom, the results of such examination being communicated as soon as possible to the medical attendant.

It is scarcely necessary to point out the value and importance of such work, as in ordinary non-specific cases it removes almost at once the element of doubt, and, in many cases determines, prior to the formation of membrane in the throat, and before the development of characteristic clinical symptoms, the existence of the disease. A moderately large number of cases can be

thus examined without the enormous degree of work which at first glance would appear necessary to the undertaking, and brings the comparatively modern revelations of bacteriology within the application of many who may not have the necessary skill or requirements for such work, and which methods, upon becoming more thoroughly understood, will be more universally applied with invaluable benefit to the community.

In addition to this, a bacteriological examination of the throat shows when the danger of communicating the disease to others, either occupants of the same house or not, ceases to exist.

Cases occasionally occur where diphtheritic bacilli find a lodgment upon the mucous membrane of the throat, and grow and propagate there to a limited extent, and yet show comparatively little clinical evidence. From a cursory examination of the throat one would be inclined to conclude the absence of danger from infection, but a bacteriological examination would reveal the presence of the bacillus in the saliva and throat exudations.

Bacteriological work applied to an institution for the cure of diphtheritic cases becomes a matter of the greatest importance. Not only does it prevent the possibility of a doubtful case being sent directly into a diphtheritic ward to become subsequently infected, but it also prevents the retention of non-diphtheritic cases in an institution where diphtheria exists, and also saves the cost of their maintenance.

In addition to this, it enables one to state positively when a patient who has passed through the various stages of diphtheritic trouble can be safely allowed to go home and mix with the public without danger from infection.

I may say that so far as the Isolation Hospital is concerned no patient is admitted to the diphtheritic ward until the case has been proven bacteriologically to be one of diphtheria, nor is the patient allowed out of the Isolation Hospital until the bacteriological examination of the throat has proved the absence of the infecting germ.

The results of our investigations in connection with diphtheria has been to draw attention to the school as the great distributing centre, nor do I entertain the opinion that the sanitary condition of the school is often to any great extent causative, but the school must be regarded as the focal point of distribution, and when diphtheria exists in a thickly populated locality the necessity of closing the school, even in the absence of cases of diphtheria presenting themselves in its classes, may, under such circumstances become apparent.

WINDSOR.

Report of the Medical Health Officer.

To the Chairman and Members of the Local Board of Health:

Gentlemen,—You are aware that I was not appointed Medical Health Officer until July 3rd, 1895. Since that time there have been two deaths from typhoid fever. As to the number of cases, they have not been reported. Of scarlet fever ten cases, no deaths; diphtheria five cases, and one death; smallpox, none; Asiatic cholera, none. There have been several cases of malaria, but, according to the population, not as many as formerly. We have a better system of drainage than a few years ago, and I think will compare favorably with any other city with the same population in the Province. We, that is, the Chairman of the Board of Health, the Sanitary Inspector and myself, have worked amicably together, succeeded in having about sixteen dwelling houses, where the drainage or plumbing were very defective and had been so for some years, remedied. I would suggest, as regards the garbage, that removal be given to one or more persons, if they will remove it in a reasonable time after it has been placed in a convenient place for them to remove. I would also recommend that some one person be given the contract to remove all dead animals found on the streets or alleys, and they to remove them immediately after being notified.

(Sgd.) ROBERT LAMBERT, M.D.,
Medical Health Officer.

REPORT OF SECRETARY.

WINDSOR, December 13th, 1895.

To the Chairman and Members of the Board of Health:

GENTLEMEN,—Pursuant to the provisions of the by-law respecting the public health, I have the honor to submit for your consideration a report upon the sanitary work done during the year, as well as upon the sanitary condition of the municipality.

In respect to the sanitary work accomplished, there is little reason for an extended statement. Nothing new in that direction has been undertaken, but the established methods for the improvement of the condition of the municipality have been employed with the usual zeal. The cost to the Board of the collection and disposal of garbage and rubbish has been $317.90. New rules and an entirely new system for the removal of this refuse must needs be speedily put into force, in order that cheaper, more effective and safer work may be done. At present the right of way for a public thoroughfare is used for the purpose, which for obvious reasons in the interest of the community must be discontinued. A suitable piece of ground should forthwith be secured, and the work of collecting and effectual burying of garbage therein, under stringent regulations established by the Board, should be done by contract annually entered into with a responsible person. The incoming Board should recognize the duty of making this change as the one particularly demanding action at its hands.

Milk analysis, temporarily discontinued, undoubtedly effected much good, first, by showing consumers the very wide divergence in the quality of the supply obtained from the respective sources, and secondly, by convincing dealers that in order to retain trade they must bring up to, and maintain at, an established grade the milk sold within the city. The milk by-law passed by the council last January provides the machinery necessary for amply protecting our people against the evil consequences of impure milk; and if the authorities live up to the duties imposed upon them respectively by said by-law, the public must soon cease to find ground for complaint on that score. Some fifty licenses under the by-law have been issued to milk vendors, and while it is possible this number does not represent the whole, there can be but few delinquents and any such may be readily identified.

Meat inspection has thus far not been specially provided for, and it is not too much to expect from the Board, that some attention should by it be given to the consideration of that matter at no remote period. While milk and meat are regarded as the most common mediums of spreading disease, and, therefore, to be necessarily the most carefully and frequently tested, there are other articles of food by many observers believed to be so adulterated as to be unwholesome; and while the voice of this community is silent, or practically silent, at the present day as to any necessity for general food analysis, an organization directly charged with the duty of safeguarding the public health, can hardly acquit itself conscientiously without at least glancing at the character of the major portion of the materials upon which the public subsist.

In this connection the old story of our water supply must not be allowed to pass unnoticed. That the water has been alternately good and bad, there is hardly any doubt, and although the citizens hold diverse opinions as to the correct means to be adopted for the purpose of securing a constantly pure article for domestic use, the water commissioners have determined as a preliminary step, it is assumed, to extend the intake pipe 200 feet farther out in the river, where in the principal current they hope to avoid contamination, by sewage at any rate, and have now upon the ground a twenty-inch tube made of one-quarter-inch steel, which, by reason of the early insetting of winter, probably will not be laid until next spring. The cost of this work will be, in round figures $2,000. It will by all be earnestly hoped that this change may solve the problem so long a live issue in Windsor, but in the event of a contrary result, other means must be resorted to and tests continued until the purest water obtainable shall be furnished our people.

Facilities for the drainage of private property have been very materially increased during the year, lateral sewers having been constructed as follows: On Pellissier street, 862 feet; Cameron avenue and Sandwich street, 2,550 feet; Vera Place, 325 feet; Wyandotte street, 655 feet; London street, 485 feet and Brant street, 180 feet—a total length of 5,057 feet, constructed at a cost of $7,000.

Now, as to the second division of the matter that must under the by-law constitute this report, namely, the sanitary condition of the municipality.

While it has been generally remarked by citizens, especially during the summer months, that sickness prevailed to an unusual extent, it only required familiarity with other places of similar population to satisfy an enquiring mind that, despite the evidences immediately under view, Windsor ranked, in fact, second to no other town in the healthfulness of the population. The number of cases of typhoid fever, for instance, from time to time recited (they are not reported to the health office except when death ensues), occasionally provoked a feeling of uneasiness and seemed to reflect upon the quality of the river water, until, through the press and other sources, it was learned that diseases evidencing in a greater or less degree typhoid symptoms prevailed all over the country—indeed, on the other side of the boundary line as well as on this—and especially in localities where the water supply was derived from wells and not from flowing streams, when the condemnation of Detroit river water as a source of this fever became naturally less marked. There has been a large increase over last year, up to the date of this report, in the number of cases of diphtheria and scarlet fever, the number in 1895 being, of the former fourteen, and of the latter nineteen. A solitary case of smallpox and two of scarlatina complete the list, which, omitting typhoid fever for the reason above noted, gives a total of thirty-six cases of contagious diseases occurring in a population of 11,549, or a proportion of [illegible] per 100; of the fourteen cases of diphtheria two proved fatal, and three deaths resulted from typhoid fever, a total of five deaths from contagious diseases, or one death to 2,309.8 of the population.

The total deaths registered in the city up to the date of this report, number 150, of which number, seven were non-resident, namely, two were drowned in Detroit river, two were killed on railways, and three died in hospital. If seven be added to the 150 deaths, which is a proportionate number for the balance of the year, we shall have a total of 157 for the year, as against 170 last year. Appended hereto are statements (A and B) shewing the disease reported in each case as the cause of death and the age of the deceased, which, to the professional man or others skilled in such matters, will afford material of considerable interest.

It would not be proper to close this report without reference to the pavements upon our principal streets, which have done so much towards the progress of our town, but many of which are undoubtedly nearing the end of their usefulness and becoming a source of great danger to the health of the community. Cedar block pavements certainly have their advantages, and great ones too, in a small city; but it is time that our public men were pushing comprehensive investigation in proper places towards advantages offered by the employment of other materials, or at any rate, to a better method of constructing pavements of cedar than the one practiced in this place. From a sanitary point of view, it would appear self-evident that any material that will permit of the passage of water through it to the foundation or bed of the pavement, there to remain, must be bad; whilst on economic grounds such must also be condemned, because rapid decay of the pavement and consequent expense for repairing and renewal, is an inevitable result. It is quite true that the construction of public works of the kind under notice does not fall within the province of this Board, but as guardians of the public health it should be the privilege if not the duty of the Board to warn another and directly responsible corporation of the municipality against the continuous use or adoption of materials and methods seemingly surcharged with the elements of great danger to the healthful well being of the people. It might even be conceived, perhaps, that the Board is entitled to the right to establish the principle that no street pavement should hereafter be constructed until its foundation bed be properly and efficiently drained into a sufficient sewer, nor until, in the case of a wooden superstructure, some plan be employed to render the material as near as possible impervious to the water falling thereon.

It is worthy of note and commendation that the plan a few years ago adopted by the municipal council of constructing lot connections from public sewers to the fence line of the property intended to be drained, simultaneously with the construction of the sewer itself, has this year been followed as far as possible in respect to the half dozen sewers completed. The great difficulty every successive Board of Health is confronted with in its endeavour to secure the drainage of wet and unhealthy premises along the line of sewers not provided with these lot connections, is the expense of the work necessarily entailed upon the lot owners, particularly in the case of main sewers, who generally can ill afford to meet the cost in a lump sum; but where drains are only needed to be made within the premises and to a comparatively easy level, the hardship disappears.

Most respectfully submitted,

STEPHEN LUSTED,
Secretary.

CITIES.

REPORT to the Provincial Board of Health containing Summary of Replies

Municipality.	Names of M.H.O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Toronto.....	Charles Sheard, M.D..	House to house inspection once a year.	Scarlatina, 139 cases; diphtheria, 525 cases; typhoid, 347 cases.
Hamilton	J. Ryall, M.D.; Lewis Macdonald, George Potter, sanitary inspectors.	General inspection.....	.....
Ottawa	A. Robillard, M.D.; G. McNeil, sanitary inspector.	General inspection twice a year.	Scarlatina, 182 cases; diphtheria, 287 cases; typhoid, 195 cases.
Kingston	S. H. Fee, M.D.; W. S. Gordon, sanitary inspector.	General inspection.....	Scarlatina, 17 cases; diphtheria, 70 cases; typhoid, 35 cases.
St. Catharines.....	No M.H.O.; A. Bouldon, sanitary inspector.	House to house inspection once a year.	Scarlatina, 20 cases; diphtheria, 3 cases; typhoid, 10 cases, 1 death.
St. Thomas	W. C. Van Buskirk, M.D.; W. J. Shaw, sanitary inspector.	General inspection once a year.	Scarlatina, 13 cases, 1 death; diphtheria, 23 cases, 5 deaths; typhoid, 38 cases, 3 deaths.
Chatham	W. R. Hall, M.D.; J. R. Guttridge, sanitary inspector.	Inspection in spring of each year.	Scarlatina, 15 cases, 1 death; Diptheria, 74 cases, 2 deaths; typhoid, 68 cases.
Windsor	R. Lambert, M.D.; D. Grieve, sanitary inspector.	General continuous inspection each year.	Smallpox, 1 case; scarlatina, 21 cases; diphtheria, 14 cases, 2 deaths; typhoid fever, 3 deaths.

CITIES.

to a Circular *re* Sanitary Condition of the Municipality for the year 1895.

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
Isolation hospital...	Compulsory before admission to school; 300 vaccinations.	All goods removed to disinfection station.	Forty-six returned: all public schools.	Average cubic air space 205 cubic ft.
Isolation hospital ..	No	Usual methods	Twenty eight schools	.....
Isolation hospital...	Vaccination not compulsory.	Usual methods	Seventeen public schools, 20 separate schools.	Public schools 275 cubic feet; separate schools 225 cubic feet.
.....	No; number of children 5,721.	Usual methods	Nine schools	203 cubic feet .....
Isolation hospital for smallpox patients only.	Yes; no children vaccinated in 1895.	Disinfection under direction of physician in attendance.	Eleven schools.	Public schools 331 cubic ft.; separate schools 280 cubic ft.
An isolation hospital for smallpox cases.	No vaccination this year, 1895.	Generally attended to by physician having charge of the case.	Seven schools	About 160 cubic feet for all schools.
No hospital. Usual methods adopted for isolation purposes.	No vaccination this year.	Houses thoroughly fumigated.	Six public schools; 32 rooms.	271 cubic feet .....
Isolation at house ..	None this year... ..	Usual methods	Eight schools	255 cubic feet .....

CITIES.

REPORT to the Provincial Board of Health containing Summary of Replies

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Toronto	Forms supplied		City waterworks
Hamilton		Factories 83; employees 5,000.	City waterworks; a few wells.
Ottawa	Yes; yes		City waterworks; no wells.
Kingston	Yes; yes	Four factories, 1 cotton mill, 190 employees; 1 hosiery, 190 employees; 2 cigar factories, 110 employees.	Waterworks
St. Catharines	Notification forms are only supplied to physicians.	Twenty-four factories, employing 873 employees.	Waterworks; a few wells still in use.
St. Thomas	Physicians only supplied with forms.	A large number of factories, mills, and so forth.	City water becoming more generally used; a large number of wells still in use.
Chatham	Yes		Waterworks and a few wells.
Windsor	No	Few factories.	Waterworks

CITIES.

to a Circular *re* Sanitary Condition of the Municipality for the year 1895.

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so is there contract removal?	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.)
One hundred, there is medical inspection.	Thirty-five slaughter houses; offal and blood removed daily.	Garbage cremated; night soil removed by private parties.	Water closets connected with city sewers.	.....
164 dairy cows	.....	Used with ashes for filling in purposes.	Water closets connected with sewers.	.....
.....	No slaughterhouses in city.	Night soil removed by contract.	.....	.....
417 dairy cows; no examination.	Two slaughter-houses; none licensed.	Night soil removed by contract.	Sewage drained into river.	Two tanneries, two tallow melters.
129 dairy cows; monthly inspection made by sanitary inspector. All in healthy condition.	Three slaughter-houses; none licensed.	Garbage and night soil is removed by scavenger on request of householder.	No contract	Three tanneries, one soap factory, one hide house.
No inspection	No slaughterhouses allowed in city.	No contract	Very few dry earth closets.	One hide house, seven tallow houses, one soap house, and gas works.
184 dairy cows; no inspection.	None	By contract	Some sewage drained into sewers.	None.
.....	None	By householder	Sewers	None.

TOWNS.

Municipality.	Names of M.H.O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Aylmer	C. W. Marlett, M.D.; Wm. Hare, sanitary inspector.	Inspector by personal visits reports to Local Board.	Smallpox, 1 supposed case; scarlatina, 2 cases.
Amherstburg	Oscar Teeter, M. D.; J. R. Tomlinson, sanitary inspector.	House to house inspection during April; after that a general inspection during the balance of the year.	Scarlatina, 2 cases; diphtheria, 2 cases; typhoid, 3 cases.
Alliston	J. J. Harper, M.D.; George McGinnis, sanitary inspector.	Inspector made two examinations of premises during the year.	Diphtheria, 3 cases, 1 death.
Barrie.....	L. Oliver, M.D.....	.....	One case of scarlatina was the only contagious disease reported in our town. The health of the town will compare very favorably with other years.
Brampton..... ...	John Fingland, sanitary inspector.	Sanitary inspector visits all premises once a year.	Scarlatina, 5 cases, 1 death..
Bracebridge	Samuel Bridgland, M D.; Thomas Dodd, sanitary inspector.	Inspector visits all premises four times a year.	Diphtheria, 32 cases, 3 deaths; typhoid fever, 13 cases.
Bowmanville	B. Lammiman, M.D.; Richard Jarvis, sanitary inspector.	General inspection yearly ...	Scarlet fever, 40 cases; diphtheria, 29 cases, 7 deaths; typhoid fever, 5 cases, 1 death.
Brockville	— Harding, M.D	Satisfactory sanitary condition.	Typhoid fever, 10 cases; measles, 9 cases; scarlet fever, 4 cases; diphtheria, 30 cases, 5 deaths.

TOWNS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
Smallpox patients isolated; no regular hospital.	All school children vaccinated that had not distinct marks of successful vaccination.	All houses are disinfected and fumigated under the care of M. H. O.	Two public schools, 9 rooms, average 47 in each; collegiate institute, 6 rooms, average 25 in each.	Public school, 260; collegiate institute, 450.
No isolation hospital; house is placarded; children not allowed to attend school; the attending physician sees to disinfection of clothing, etc.	None	.....	Three schools, 4 rooms in public, 1 in separate (colored), 1 in separate (R. C.).	.....
No isolation hospital; houses are placarded.	No; vaccination is not compulsory.	.....	One public school, 6 rooms, average attendance, 45.	220 per pupil .....
....	400 vaccinated.....	....	Our schools are in a fair sanitary condition.	.....
No hospital	Vaccination compulsory; 535 children on school roll.	.....	Four schools; number of rooms, 12; average attendance, 44.	... .
No isolation hospital.	No; 859 school children.	Disinfected under direction of M. H. O.	One school; number of rooms, 7; average attendance, 64 in each room.	.. ..
Isolation; houses placarded; no hospital.	Vaccination compulsory; 680 school children.	... .	Three schools	250 cubic feet.....
....	....	.....	.....	....

TOWNS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Aylmer	Yes; both used; yes.	Door and sash factory, 10 hands; canning factory and vegetables and meats, from 20 to 100 hands; door and sash, 6 hands; organ factory, 3 hands; organ factory, 5 hands; barrel and stave factory, 10 hands; staves and lumber, 10 hands; horse net factory, 5 hands; hubs and spoke factory, 15 hands; cider and vinegar factory, 3 hands; flour and feed mills, 6 hands; furniture factory, 15 hands; foundry, 15 hands.	Wells only; sand and clay loam with quicksand subsoil.
Amherstburg	Yes; the secretary of Local Board notifies the teachers.	None	Waterworks system; intake from Detroit river.
Alliston	Yes	Woollen factory, 30	Wells; soil sandy
Barrie			From artesian wells; good quality.
Brampton	None	Factories, 4	Wells for domestic purposes.
Bracebridge	Supplied to physicians only.	Two factories; 2 tanneries	Partly from municipal waterworks; partly from wells.
Bowmanville	Yes; both supplied	One factory, 100 employees; 2 foundries, 20 employees.	Well water; good; soil, clay loam; sub-soil, clay.
Brockville			

TOWNS.—*Continued.*

No of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal?	State number and kind of noxious trades. How licensed and regulated? (See sec. 63. Public Health Act.)
No dairies inside corporation; no inspection.	None inside municipality.	Garbage taken away by householder; night soil by contract.	Dry earth closets; night soil carted away under contract; sewage disposed of by sewage drains.	None.
None	None within municipality.	By householder	Householder makes contract to bury the same.	None.
Two dairies; no veterinary inspection.	Four slaughter-houses.	By householder; sanitary inspector is watchful in this matter.	Street sewage goes to the river.	None.
.....	.....	Good sewerage system.	.....	.....
Twenty dairy cows; no inspection.	Four slaughter-houses; licensed.	Some by contract; some by householder.	.....	None.
Thirty-six dairy cows; no inspection.	One slaughter-house; none licensed.	By contract	Dry earth closets ...	None.
Two dairies, 25 cows each; no inspection.	Five slaughter-houses; on the outskirts of town.	Garbage and night soil removed by householder.	Sewage disposed of by drains; several dry earth closets in private residences.	None.
The milk supply is exceptionally good.	.....	.....	Everything being done to make the sewage good.	.....

TOWNS.—*Continued.*

Municipality.	Names of M. H. O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Clinton	J. W. Shaw, M.D.; J. Wheatly, sanitary inspector.	Notices are distributed 1st April to every householder, giving till 1st May to clean up. Inspector visits afterwards, if not cleaned the officer engages help and charges same against the property.	Scarlatina, 15 famalies; typhoid, 12 cases, 1 death.
Cobourg	E. C. McNichol	Ordered many premises cleaned.	Scarlatina, 7 cases; diphtheria, 4 cases, 2 deaths; typhoid, 4 cases.
Collingwood	A. R. Stephen, M.D.; B. F. Lewis, sanitary inspector.	Once a year general inspection made.	Scarlatina, 29 cases; typhoid, 15 cases.
Dresden	Edwin Gougin, sanitary inspector.	Inspection in the spring and at intervals during the year of all back yards, premises and privies.	Scarlatina, 2 cases; diphtheria, 6 cases, 2 deaths; typhoid, 3 cases.
Dundas	T. A. Bertram, M.D.; Peter Atkins, sanitary inspector.		Typhoid, 1 case
Elora	David Geddes, sanitary inspector.	General inspection in spring.	Typhoid, 4 cases
Essex	G. McKenzie, M.D.; J. Gormley, sanitary inspector.	Thorough inspection several times a year.	Diphtheria, 1 case; typhoid, 6 cases.
Fenelon Falls	A. Wilson, M. D.; S. Nevison, sanitary inspector.	Inspection in spring. Notices sent out calling on all residents to cleae up.	Scarlatina, 25 cases
Forest	H. J. Nash, M.D.; Henry Harvey, sanitary inspector.	Regular inspection	
Fort William	W. H. Hamilton, M.D.	Health of town good during the year.	Measles, 23 cases; scarlatina, 11 cases; typhoid, 3 cases, with 1 death; diphtheria, 7 cases, 2 deaths.

TOWNS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
No hospital. Every house infected is placarded and isolation demanded.	No; 474; about 15..	Houses disinfected with sulphur and chloride of lime, all offal disinfected and buried, clothing boiled and saturated with corrosive sublimate solution.	Two schools, 13 rooms, average attendance 300.	225 feet .....
.....	.....	.....	.....	.....
No isolation hospital.	No; 856 school children on roll.	.....	Four schools, 39 children in each room.	Lots of air space....
Patient separated from other members of the family; no hospital; houses placarded.	Yes; 535, between the ages of 7 and 21; none.	The use of disinfectants under supervision of the medical attendant..	Three; 8 rooms; attendance in each 45, 31, 32, 45, 50, 54, 56; total 345.	240 .....
Patients removed to some unoccupied building.	Vaccination not compulsory.	.....	One school; 13 rooms; about 450 pupils.	.....
None	No general vaccination.	Physicians in attendance take charge in such cases.	Three schools	300 cubic feet in public and separate schools, 800 in high school.
Isolate the house; no hospital	A thorough vaccination of children one year ago.	Ordinary means employed.	Two schools	300 cubic feet .....
No isolation hospital.	No	All clothing fumigated.	Two schools	242 cubic feet .....
.....	No	.....	Two schools, high school, public school.	250 cubic feet .....
Every precaution taken; the medical health officer paying much attention in such cases.	.....	.....	.....	.....

TOWNS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Clinton	Yes; supplied to teachers of all schools and M.D's. of towns.	Seven factories, organ factory, 7; planing mills, 3; tanning mill, 1; thrashing machine, 1; barrel factory, 2; bicycle factory, 2; carriage, 3.	All wells; mostly surface water; gravel bottom.
Cobourg			
Collingwood	None supplied	One factory, 45 employees	Waterworks; few wells.
Dresden	Supplied to teachers who use them as occasion requires.	Hub, spoke and bending factory, average 35; stave and hoop factory, 50; sash and door factory and planing mill, 5; foundry and machine shop, 4.	Wells; two thirds of the town sandy loam with quick sand; one-third clay loam with clay sub-soil.
Dundas	Yes	Nine factories	Waterworks and wells
Elora	Forms supplied to physicians.	Four factories; number of employees, 131.	Wells; clay loam upon limestone rock; wells bored into rock.
Essex	No forms supplied	Three factories; two saw mills.	Wells
Fenelon Falls	Yes	Ten factories and mills.	Chiefly from wells
Forest	Yes	One flour mill, 1 sash factory, 1 foundry.	Wells; sandy loam, clay subsoil.
Fort William			

TOWNS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal?	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.
One dairy, 65; one dairy, 40; both herds are inspected for tuberculosis.	Four; no license; offal fed to pigs.	By householder; placed on farms 1½ miles from town.	A few dry earth closets.	None.
Milk supply found of good quality.	Slaughterhouses in good condition.	.....	.....	.....
478 dairy cows	Four slaughterhouses.	.....	Central part of town dry earth closets.	None.
None in municipality.	None in municipality.	By householder	Partly by dry earth closets; principally thrown on vacant lots.	None.
.....	None in town	By householder	Some dry earth closets.	None.
None	Slaughterhouses not licensed.	By householder; dry earth closets in general use.	No contract removal.	None.
None	None	By contract; dry earth closets.	No sewers	None.
No inspection	None	By householder	No system.....	.....
None	Two slaughterhouses.	By householder	Dry earth and pit closets.	....
....	.....	.....	.....	.....

TOWNS.—*Continued.*

Municipality.	Names of H. M. O. and sanitary inspector.	State, extent and methods of general inspection.	Contagious diseases.
Gore Bay.....	J. Johnston, M.D; D. Beatty, sanitary inspector.	Directly anything in shape of disease is ascertained his is disinfected and isolated.	Typhoid, 3 cases.....
Galt	J. S. Wardlaw, M.D.; Adam Ray, sanitary inspector.	House to house inspection once a year.	Scarlatina, 4 cases; typhoid, 10 cases; 4 deaths.
Ingersoll.....	M. F. Lucas, M.D....	Every cesspool within the corporation has been cleaned up. This work has been done systematically and thoroughly.	Our death rate is very low, being about one for every 77 of the population; diphtheria, one death.
Kincardine	N. Hopkins, M.D.; J. Pratt, sanitary inspector.	General inspection from house to house.	Diphtheria, 15 cases, 2 deaths; typhoid, 27 cases, 2 deaths.
Lindsay.....	J. McAlpine, M.D....	Sanitary condition highly satisfactory.	Measles, 7 cases; scarlatina, 3 cases, 1 death; diphtheria, 35 cases, 7 deaths.
Meaford	C. R. Maclean, M.D.; R. Dealy, sanitary inspector.	Frequent visits are made by sanitary inspector through thickly settled parts of the town.	Scarlatina, 11 cases reported; 1 death.
Mount Forest	No M. H. O.; Chas. Boulding, sanitary inspector.	Inspector makes visits once or twice a year.	Scarlatina, 8 cases; diphtheria, 4 cases, 1 death; typhoid, 12 cases, 1 death.
Mattawa.....	M. James, M.D.; M. Filkin, sanitary inspector.	Inspector carefully inspects premises three times a year.	Diphtheria, 3 cases; typhoid, 2 cases.
Napanee	E. B. Perry, sanitary inspector.	Thorough inspection in spring	Typhoid, 14 cases, 1 death ..
Newmarket	D. M. Campbell, M.D.; P. J. Anderson, sanitary inspector.	General inspection made by sanitary inspector.	Typhoid, 2 cases, 1 death ...

TOWNS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
House isolated; garments, furniture, etc., fumigated; garments, when necessary, burned.	Yes; none this year, being all vaccinated 1894.	No contagious diseases have found foothold, owing to the vigilance of Dr. Johnston.	One school, 3 rooms—1st, 30; 2nd, 40; 3rd, 50.	.....
No isolation hospital.	Yes; vaccination in 1895.	....	Four schools; one high school.	.....
....	A number of persons were vaccinated.	.....	.....	....
Confined as far as possible to the house; no hospital.	Vaccination general.	Usual methods adopted.	Two schools—High School, 85 pupils; Public School, 9 rooms; 397 pupils in all.	High school, 525 cubic feet; public school, 240 cubic feet.
Usual method adopted.	.....	....	.....	.....
Isolation of patient as far as circumstances will allow; no hospital.	No; cannot say how many vaccinated.	Washing of walls of dwellings, use of disinfectants and other methods.	High school, 5 rooms, 75 to 100 pupils; public schools, 9 rooms; average attendance about 50 in each.	....
No hospital; usual methods at house of patient.	About 400; no record of number vaccinated.	Each medical doctor has promised to attend to this matter in his practice.	Two schools; 9 in one, 7 in the other.	Don't know.
Isolation hospital.	Not compulsory; 600 school children; no vaccination during the year.	General methods adopted.	Two schools.....	One hundred and twenty cubic feet.
No isolation hospital. Houses placarded.	Not compulsory	By physicians in charge.	Three schools. Average attendance in each room 50.	About 258 cubic feet.
No isolation hospital. Usual methods.	No	Houses fumigated ..	Four schools.....	.....

TOWNS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Gore Bay	Cannot say	Two factories—saw and grist mill, 20 hands; 1 planing mill, 4 hands.	Wells and lake; clay loam and gravel.
Galt		Twenty-three factories	Town waterworks
Ingersoll			
Kincardine	No	Cabinet factory, 80 hands; stove foundry, 20 hands; boiler works, 15 hands; foundry, 12 hands.	From the lake
Lindsay			M. H. O. draws attention to the fact that in the five families having typhoid, all used well water.
Meaford	Yes; yes	No large factories; 1 planing factory, 1 carpet factory, 1 foundry, 1 saw mill, 1 grist mill.	Waterworks supply water for domestic service in central part of the town; many wells used.
Mount Forest	Yes; yes	One large cabinet factory, 41 hands; flour and oatmeal mills, 20 hands; other factories, small, about 10 hands.	Wells; gravel and blue clay.
Mattawa	No	No factories	Water is drawn from Mattawa and Ottawa Rivers.
Napanee	Yes	One furniture factory, 35 employees; 1 carriage factory, 15 employees; 2 grist mills, 20 employees; 2 sash factories 15 employees; 1 soap factory, 6 hands, and numerous others.	Wells; mostly clay with rock bottom.
Newmarket	Yes	Ten factories and mills	Wells

TOWNS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal?	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.)
None; no general dairy.	Two; none licensed; offal fed to hogs.	.....	.....	.....
.....	.....	By householder	Privy pit system still in use.	.....
The milk supply of the town is being kept under surveillance by a system of vendor's licenses and an inspector and test of the milk supplied.	.....	.....	Next season we expect to put in a system of sewerage.	.....
None	Two	By householder	Under direction of sanitary inspector	None.
.....	.....	.....	M. H. O. advises board to construct sewers.	.....
No dairy cattle kept here.	One slaughter-house; no drainage system; offal is fed to hogs.	No system of disposal.	No system of sewerage.	None.
Two dairies; no inspection.	Three in outskirt of town.	By householder	No contract removal.	None.
None	None	Removed by contract.	.....	None.
One hundred and fifty-six cows; no inspection.	Three slaughter-houses; no license; offal fed to pigs.	By householder to dumping pit within town.	Dry earth closets....	No complaints made as to noxious trades.
A few cows	None in town	By contract	Dry earth closets and pits.	None.

TOWNS.—*Continued.*

Municipality.	Names of M. H. O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Niagara Falls	G. W. Oliver, M.D.; S. Ward, sanitary inspector.	When necessary the sanitary inspector visits premises.	
Orangeville	C. M. Smith, M.D.; R. Shields, sanitary inspector.	General inspection once a year.	Scarlatina, 1 case; diphtheria, 2 cases.
Orillia	W. C. Gilchrist, M.D.; Mr. Dreyer, sanitary inspector.	House to house inspection in spring.	Scarlatina, 27 cases, 2 deaths, diphtheria, 40 cases, 6 deaths.
Owen Sound	Allan Cameron, M.D.	General inspection	Scarlatina was epidemic during the year.
Paris	D. Duton, M.D.; J. S. Creen, sanitary inspector.	In May of each year, house to house inspection is made.	Diphtheria, 1 case; typhoid 10 cases; 3 deaths.
Peterborough	J. Clarke, M.D.; G. J. Rosgel, sanitary inspector.	A very thorough inspection made by inspector during the year.	A number of cases of typhoid
Petrolea	G. D. Lougheed, M.D.; J. Ferguson, sanitary inspector.	Regular inspection	Yes; about 800 school children.
Pembroke	W. W. Dickson, M.D.; John Campbell, sanitary inspector.	House to house inspection in spring.	Scarlatina, 34 cases, 1 death; diphtheria, 18 cases, 2 deaths; typhoid, 17 cases, 6 deaths.
Picton	H. B. Evans, M.D.; H. N. Babbitt, sanitary inspector.		
Prescott	W. P. Buckley, M.D.; Robert Smith, sanitary inspector.		

TOWNS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases; give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
.....	In 1894 vaccination was very general.	Usual methods employed.	Three schools	.....
Isolation as far as possible.	Not compulsory	....	Two schools	.....
.....	....	....	....	.....
.....	....	....	... .	....
Contagious diseases are isolated in their houses, and disinfectants used; members of families not allowed to attend school or work in factories.	Yes; so far as the school children are concerned, but not for others; 100 were vaccinated in 1894 and 25 in 1895.	This depends upon the medical attendant.	Five schools; high school, 6 rooms, attendance 70 to 80; separate school, 2 rooms, 63 in attendance; first ward, 4 rooms, attendance 216; south ward, 2 rooms, attendance 100; north ward, 1 room, attendance 25.	About 190 cubic feet.
Isolation hospital ..	.....	....	....	....
.....	.....	.....	.....	.....
Usual methods adopted	Vaccination not compulsory; 1,130 school children.	....	Five schools.....	. .....
.....	.....	....	.....	.....
....	No	Usual methods	Three schools	Cubic air space public school 210 cubic feet.

TOWNS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Niagara Falls	No	Two factories, 105 employees.	Niagara River; in a few cases wells.
Orangeville	Yes		Wells
Orillia			Water supply exceptionally good.
Owen Sound	Yes		
Paris	No forms for teachers.	Woollen, winsey, alabastine, needle, nickel plating and carpet manufacturers, employing 450 hands.	Public supply from springs; a number of wells are used on the flats, there is danger of contamination; sub-soil gravel soil light and stony.
Peterborough			
Petrolea	No forms		
Pembroke	Not always used, but supplied as required.	No factories in which there are many employees.	Lake and wells; board have urged the closing of wells in thickly settled portion of town.
Picton	Made use of when required.	Two canning factories, employees 250.	Springs and wells
Prescott	No forms	One distillery, 50 employees; 1 brewery, 20 hands; 1 emery factory.	Wells; limestone rock, mixed clay and gravel.

TOWNS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal?	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.)
None	None	By contract		None.
No inspection		By householder		One tannery.
Milk supply very good.		The work of removal is very satisfactory		
About 90 inspections; only partial; no special examinations for tuberculosis.	All are removed from limits of town; no licenses issued.	Night soil by contract with the Board; garbage looked after by householder.	There is no system; a few sewers exist and are discharged into Grand River.	None.
Milk supply considered very satisfactory.			The methods adopted for the removal of night soil are considered satisfactory	
Thirty cows; no examination.	Three slaughterhouses.	By contract		None.
One hundred and fifty dairy cows; no inspection.	One slaughterhouse; in good condition.	By householder	Dry earth closets; removal by householder.	None.
	None allowed in corporation.	By householder	Dry earth closets	None.
No inspection	None in town	By householder		None.

TOWNS.—*Continued.*

Municipality.	Name of M. H. O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Rat Portage	S. S. Scovil, M.D.; R. B. Donkin, sanitary inspector.	.....	Typhoid, 12 cases .....
Renfrew	T. D. Halligan, M.D.; B. J. McDermott, sanitary inspector.	.....	Typhoid, 20 cases; 2 deaths.
Strathroy	G. Henderson, M.D.; Robt. Miller, sanitary inspector.	.....	Seven cases smallpox in 1894; 1 case scarlatina, 1 diphtheria, 1 typhoid in 1895.
Sault Ste Marie	John L. Rae, sanitary inspector.	General inspection made once a year.	Scarlatina, 24 cases; typhoid, 44 cases.
Simcoe	J. C. C. Grassett, M.D.; George Coates, sanitary inspector.	In spring a careful inspection is made.	Typhoid, several cases.....
Seaforth	Dr. Burrows; Wm. Gillespie, sanitary inspector.	One general inspection during May.	.....
Thessalon	T. J. McCort, M D.; William Higgins, sanitary inspector.	General inspection.....	Scarlatina, 3 cases.....
Thorold	J. K. Johnston, M.D.	House to house inspection ..	Typhoid, 2 cases; 1 death ..
Toronto (North).....	S. R. Richardson, M.D.; G. H. Lawrence, sanitary inspector.	General house to house visitation.	Scarlatina, 1 case; diphtheria, 11 cases; typhoid, 5 cases.
Tilsonburg	C. McDonald, M.D.; A. Pow, sanitary inspector.	Regular inspection every three months.	....
Uxbridge	H. Bascom, M.D.; Wm. Tuck, sanitary inspector.	House to house inspection ..	Typhoid, 35 to 40 cases.....

TOWNS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details of how carried out.	Number of schools: Number of rooms and attendance in each.	Average cubic air space to each pupil.
No isolation hospital.	No	.....	Four schools.....	.....
No hospital	Vaccination not compulsory.	....	Four schools.....	.....
Houses placarded. Temporary hospital during smallpox epidemic for smallpox patients only.	Compulsory; 921; no report of number vaccinated.	Rules laid down by Provincial Board carefully carried out under the direction of M. H. O.	Three public school houses; 9 rooms; average to each room, 45 to 50.	....
No special arrangements made.	No vaccination took place this year.	As directed by physician in charge.	Three schools	Varying from 100 to 300 cubic feet.
No arrangements made in such cases.	.....	None found necessary, having had no contagious diseases during the year.	Two schools	The air space is considered ample.
No isolation hospital.	Number of school children, 624.	No uniform method.	Two schools; 1 public school, 1 high school.	Average cubic air space per room 295 cubic feet.
No hospital	Yes	Usual methods	Three schools	....
No hospital	No	....	....	223 cubic feet . ..
Isolated at house...	350 school children..	Usual methods	Two schools	252 cubic feet . .
.....	Yes; 350 school children.	.....	Two schools	Average cubic air space 210 feet.
Isolated at home ...	No	....	2 schools; 1 high, 1 public.	240 cubic feet .....

TOWNS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Rat Portage	No forms	Three saw mills, employees 250; Four mills 80 employees; 1 box factory, 10 employees.	Principally from lake. Few wells.
Renfrew	No forms	One woollen factory and 3 mills.	Wells; clay soil and sub-soil.
Strathroy	Yes	One canning factory, 1 rake factory, 1 foundry and machine shop, 2 saw mills, 2 flour mills, 1 dairy school, 2 shingle factories, 1 stove factory, 1 carding mill and cloth factory, 1 flax mill, 1 brewery, 1 pop factory, 3 tailor establishments.	Domestic purposes; wells only; soil sandy.
Sault Ste. Marie	No	Three factories	Wells and springs
Simcoe	Yes	Six factories and mills; about 66 employees.	Wells; supply good
Seaforth	Yes	One cabinet factory, 2 planing mills, 1 foundry, 3 mills; total employees, 112.	Wells; clay loam; clay
Thessalon	No forms		Wells and lake
Thorold	No forms	One factory; 50 employees.	Wells; clay soil
Toronto (North)	Don't know		Wells; sub-soil gravel bed; pure water.
Tilsonburg	Yes	None	Wells; clay loam with gravel sub-soil.
Uxbridge			Wells

TOWNS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal?	State number and kind of noxious trades. How licensed and regulated? (See sec. 62 Public Health Act.)
128 dairy cows. No inspection.	Three slaughterhouses; no license; offal fed to pigs.	Part by contract....	....	None.
306 dairy cows. No inspection.	One slaughterhouse.	By contract	Dry earth closets; contract removal.	None of any importance.
No record. No inspection. No examination of herds.	Two slaughterhouses; no license.	By contract	Disposed under direction of board of health.	One tannery, two slaughterhouses not licensed; regulated by inspector.
About 130. No	Two slaughterhouses; no license. Under careful inspection.	By householder	No contract for removal.	None.
.....	No slaughterhouses within the town.	Partly by town and partly by contract.	....	None.
None within the municipality.	None	By householder	Very few dry earth earth closets.	None.
No inspection	Two slaughterhouses;	By householder	Drained to river and lake; no dry earth closets; no contract removal.	None.
None in town	None	By householder	Dry earth closets and vaults. By householder.	None.
389 cows	Seven slaughterhouses.	In majority of cases premises are large enough to admit of its being buried.	A few dry earth closets.	None except slaughterhouses, which are licensed.
100 cows.....	Two slaughterhouses.	By contract	Dry earth system; contract removal.	None.
None	2 slaughterhouses ..	By householder	....	None.

TOWNS.—*Concluded.*

Municipality.	Names of M. H. O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Whitby	D. P. Bagart, M.D ...	House to house inspection...	Diphtheria, 5 cases .....
Walkerville	C. W. Hoare, M.D.; A. B. Griffith, sanitary inspector.	House to house inspection by sanitary inspector.	Scarlatina, 7 cases; diphtheria, 2 cases.
Wingham	.....	House to house inspection..	Number of cases of typhoid; one case of scarlatina.
Woodstock	A. McLay, M.D.....	General inspection. Sanitary literature sent out to each house.	Diphtheria, some cases; scarlatina, some cases.
Walkerton	G. J. Dickeson, M.D.; G. H. McKay, sanitary inspector.	Sanitary inspector made house to house inspection.	Diphtheria, 18 cases; 1 death.

TOWNS.—*Concluded.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
....	No; number of children, 853; none reported.	Under supervision of medical attendant.	5. Collegiate institute, 4 rooms, attendance as follows: 30, 29, 32, 25; Henry St. school, 4 rooms, attendance 53, 52, 33, 27; Model School, 4 rooms, 56, 35, 28; Dufferin St. school, 2 rooms, 28, 35; Separate school, 1, attendance 39.	Collegiate Institute 397 feet; Dufferin St. 362; Henry St. 279; Model 297; Separate 274.
House placarded and inmates quarantined. No isolation hospital.	Compulsory as far as school children are concerned, 184. All have been vaccinated before 1895.	Fumigation by sulphur; all apertures are closed and powder allowed to burn for 8 hours; 3 lbs. to 1,000 cubic feet.	One school, 5 rooms; attendance in each 34, 27, 26, 27, 43.	400 cubic feet .....
....	... .	....	....	.....
....	....	....	.....	....
No isolation hospital.	No; number of children 947.	Under control of sanitary inspector.	3 schools; 1 public, 1 separate, 1 high.	High school 375, public school 194, separate school 196.

TOWNS.—*Concluded.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Whitby	Yes. M. H. O	1 laundry, 8; 1 tannery, 45; 1 harness hardware, 30; 1 fruit evaporator, 75.	Wells; clay loam, clay and hardpan.
Walkerville	No	Eleven factories and manufacturing companies, comprising brewery, distillery, foundry, planing mill, basket factory, wire fence works, cooper shop, blacksmith shop, Globe furniture works, malleable iron works, engine works; 60, 50, 20, 25, 40, 10, 15, 5, 60, 40 to 100, 25, respectively.	Waterworks; no wells used.
Wingham			
Woodstock			One hundred new water services put in during the year.
Walkerton	Yes; yes		Waterworks, springs and wells.

TOWNS.—*Concluded.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closetf. If so, is there contract removal?	State number and kind of noxious trades. How licensed and regulated. (See sec. 63 Public Health Act.)
None	3; offal spread over land as a fertilizer.	By householder	No system	None.
Not any	Not any	Board of works collects garbage weekly; all closets empty into sewers.	Sewers empty into Detroit river.	Not any.
		Privy pits in general use.		Not any.
Over 100; no examination.	3 slaughterhouses	Night soil removed by contract.	Sewers and dry earth closets.	None.

VILLAGES.

Municipality.	Names of M.H.O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Ailsa Craig	J. A. Anderson, M.D.	Members of local board acted as sanitary inspectors.	Typhoid, several cases reported.
Allandale	No M. H. O.; Ed. Burns, sanitary inspector.	Inspection made in the spring of each year of all back yards and closets.	None
Alvinston	A. McKinnon, M.D.; N. Patterson, sanitary inspector.	House to house inspection	No contagious diseases
Arthur	Dr. Allan; H. Cole, sanitary inspector.	General inspection	Typhoid, 9 cases
Brighton	N. B. H. Dean, M.D.; S. W. Donaghy, sanitary inspector.		Diphtheria, 2 cases
Bolton	D. Bonner, M.D.; S. A. Malford, sanitary inspector.	Visiting three times a year	Diphtheria, 2 cases
Brussels	J. A. McNaughton, M.D.; John Wright, sanitary inspector.	Inspector visits premises and sees they are cleaned.	Typhoid, 7 cases; 1 death
Bayfield	C. Sheppard, M.D.; Jas. Whitten, sanitary inspector.	Inspector did not act	Typhoid, 1 case
Belle River	C. C. Richardson, M.D.; T. Sauve, sanitary inspector.		None
Beeton	Dr. Law, M. H. O.; John Livingston, sanitary inspector.	General inspection in May	Diphtheria, 3 cases; 1 death.
Beaverton	A Grant, M.D.; Wm. Bain, sanitary inspector.	House to house inspection twice a year.	Scarlatina, 7 cases: typhoid. 1 case.
Chippawa	M. C. Dewar, M.D.		Typhoid, 1 case

VILLAGES.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and How carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
None	No; none.....	None	One; 3; 43, 41, 70.	180 feet .....
None	Not this year, but it has been in former years; 242 in municipality; 25 vaccinated.	No contagious disease this year.	One school; 3 rooms; average attendance, 55, 48. 57.	210 feet .....
....	No; about 260 school children.	....	Two schools	....
No isolation.....	No	....	Two schools	....
... .	No	....	Two schools; 1, 4 rooms; 1, 2 rooms.	.....
Patients kept isolated from other members of the family.	No	The sick room disinfected as much as possible.	One school; 4 rooms; average attendance in each, 40.	About 270.... .....
Greatest care taken to disinfect the premises.	No; 287; can't say.	Cleanliness, burying of discharges and use of disinfectants	One: 6 rooms	....
No hospital; patient and nurse excluded from outside intercourse.	All school children vaccinated in 1894; none in 1895.	Typhoid excreta disinfected, bedding, etc., boiled or burned.	One; 2 rooms; 45, 44.	220 cubic feet .....
... .	Children were all vaccinated in 1894.	. ...	One; 3 rooms; 53 children in each.	226 cubic feet ....
No hospital; houses fumigated.	Not compulsory	Thorough disinfection.	One school; 3 rooms.	350 cubic feet . ....
None; no hospital..	Not compulsory	Usual methods	One school; 3 rooms.	400 cubic feet . ...
Isolated in dwelling house; houses are placarded; no isolation hospital.	Yes; between 90 and 100; none.	Boiling and burning when deemed necessary; disinfection with sulphur fumes, washing with bichloride soda, etc.	One school; 2 rooms; attendance, 50 and 54 respectively.	206 cubic feet . ....

VILLAGES.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Ailsa Craig	None; no; no	Flax mill, 20 hands; apple factory; sawmill, 10 hands; flour mill, 4 hands.	Wells; gravelly soil; gravel sub-soil.
Allandale	Teachers not supplied.	None	Mostly sand
Alvinston	Forms supplied	Three factories	Wells; sandy loam and clay sub-soil.
Arthur	Yes	Two factories	Wells
Brighton	No	None	Wells; principally sandy loam.
Bolton	Teachers not supplied; M. H. O. on application to village clerk.	One woollen mill, 20 · 1 planing mill, 3; 2 foundaries, 12; 1 carriage factory, 2; 1 cooperage, 4; 1 pottery, 2; 1 flour mill, 6.	Top soil, clay loam; sub-soil, gravel.
Brussels	Yes yes	Two planing mills, 1 foundry, 1 flax mill, 2 flour mills, 1 salt factory, 1 woollen mill, 1 sawmill.	Wells; clay and limestone rock.
Bayfield	None supplied	None	Wells; sandy loam
Belle River	Yes	None	Black muck and clay
Beeton	No forms	One factory, 25 employees	Waterworks and wells
Beaverton	No	Six factories and mills	Wells; clay loam, with clay sub-soil and gravel.
Chippawa	Yes	One sash and door factory, 3 hands.	Wells; clay sub-soil

VILLAGES.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal.	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.)
About 20; no; no ..	None; 2 outside of village; no system of drainage; offal fed to hogs.	By contract in spring of each year.	Conveyed to lands outside of village by contract.	None.
Sixty; yes; none ..	None	Householder.....	Householder	None.
No cows.....	One slaughterhouse.	By householder	Dry earth closets ...	None.
Two dairies; no inspection.	None	Householder	A few dry earth closets.	None.
Seventy-five to 100 on farms chiefly; no inspection; no examination.	Two: none licensed.	Householders	None	None.
Four dairy cows; no medical or veterinary inspection.	Two slaughterhouses.	Used for agricultural purposes.	No dry earth closets.	None.
None; parties generally keep 2 or 3 cows; no; none.	None; 2 about half mile from village.	Taken to dumping ground outside of village by householder.	No sewers; closets and dry earth pits.	None.
No regular dairy nor inspection.	None	Burned by householder.	No sewage system ..	None.
.....	No licensed slaughterhouses except one, it being a good distance from any dwelling.	By householder	.....	None.
Sixty cows; no inspection.	One slaughterhouse not licensed.	By householder	No sewage system ..	None.
No cows.....	None	Householder.....	Dry earth closets ...	None.
None	None inside of corporation.	By householder	By drains	None.

VILLAGES.—*Continued.*

Municipality.	Names of M.H.O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Creemore	A. S. Kirkland, M.D..	House to house inspection by sanitary inspector.	Diphtheria, 2 cases.....
Cardinal	Duncan Gow, M.D.; Wm. Blakely, sanitary inspector.	General house to house inspection takes place once a year.	Typhoid, 4 cases.....
Colborne	—— Thorburn, M.D., W. H. Smith, sanitary inspector.	Frequent, and when complaints are made.	None ....
Casselman.....	No M.H.O.; G. Pierre, sanitary inspector.	Inspection made at different times during the year.	None .....
Cannington	Dr. Gillespie, M.H.O.; Charles Arnott, sanitary inspector.	General inspection twice a year.	Scarlatina, 1 case; typhoid, 5 cases.
Chesley	Dr. Cooke, M.H.O.; R. J. Follis, sanitary inspector.	....	Scarlatina, 20 cases .....
Clifford	Dr. Crandall, M.H.O.; H. Torrance, sanitary inspector.	Inspection made twice a year.	Scarlatina, 8 cases, 2 deaths; Diphtheria, a few cases.
Dundalk	James McWilliams, M.D.	House to house inspection, and with few exceptions everything was found in a sanitary condition.	Scarlet fever, 4 cases; 2 diphtheria. During the summer months an unusually large number of cases of typhus, malaria fever existed.
Durham.....	—— Park, M.D.; —— McDonald, M.D., sanitary inspector.	General inspection twice a year by sanitary inspector.	Scarlatina, 4 cases, 1 death; diphtheria, 1; 1 death.
Dunnville	N. Hopkins, M.D.; M. A. Stearns, sanitary inspector.	House to house inspection in the spring.	Scarlatina, 2; diphtheria, 4; typhoid, 2.
Delhi	R. B. Wells, M.D....	Limits of village	Scarlatina, 14 cases; 1 death.

VILLAGES.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
Patients kept isolated in room 40 days.	No; about 200; quite a number vaccinated.	Disinfected under supervision of M. H.O.	One; 4 rooms; attendance, 170.	.....
No isolation hospital; sulphur used to disinfect house and contents; stools disinfected by chloride of lime.	No; 273; no vaccination.	No contagious diseases, save as under 4.	One; 4 rooms; attendance, 56, 60, 59, 98.	169 cubic feet .....
Houses placarded; no hospital.	No; 250; none specially.	Always under the direction of M. D. S.	High school, 2 rooms; No. 1, 40; 2, 25; public school, 4 rooms, 50, 40, 45, 50 respectively.	200 cubic feet.....
None	Not compulsory	None	Two; average attendance, 35, 75 each.	.....
No isolation	Not compulsory	.....	Two schools; 5 rooms.	.....
Usual methods	Not compulsory	.....	Six schools	200 cubic feet .....
No hospital	.....	Left to physicians ..	One school	.....
Isolation, disinfection and placarding the houses.	No	Houses thoroughly scrubbed and carbolic acid used freely.	One; 3; about an average of 40.	280 .....
Placarding houses ..	No	Usual methods of disinfection.	One school; 6 rooms; average attendance, 50.	250 .....
Home isolation; no hospital.	No	Under control of medical men in charge.	One high school 1 public school; 7 rooms; attendance in each as follows: 27, 33, 49, 50, 58, 55, 68.	No. 1, 590; No. 2, 206; No. 3, 151; No. 4, 136; No. 5, 128; No. 6, 144; No. 7, 117.
Room upstairs where all carpets and furniture not required removed; sheet saturated with carbolic solution being over the door; all but nurse excluded from room.	No; about 200; none	Feeding utensils disinfected by boiling water and carbolic solution; clothing by boiling water and chloride of lime, etc.	One; 3 rooms; 50 in each.	.....

VILLAGES.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Creemore	Yes	Two factories, 1 planing mill, 1 woollen factory, 5 hands each.	Gravel
Cardinal	No	Edwardsburgh starch factory, 100 hands; stave and barrel factory, 14 hands.	Sandy loam with clay subsoil.
Colborne	None used; verbal notice.	None	Wells; clay; gravel
Casselman	None	One farming implement establishment, 4 hands; 2 sawmills, 30 hands.	River and wells; loamy soil.
Cannington	Yes	One woollen mill, 25 to 30 employees.	Wells; principally clay
Chesley	Yes	Ten or 12 factories and mills.	Wells; clay
Clifford	Yes	Nine factories and mills	Wells
Dundalk		Cheese factory; woollen mill.	All by wells
Durham	No forms	No factories	Wells; gravel
Dunnville	Yes; yes	Two sash factories, 14; 1 foundry, 4; 1 machine shop, 8; 1 woollen mill, 20; 1 sawmill, 8; 4 flour mills, 14.	Water supplied to any persons desiring such, but wells are chiefly used; soil, loam; sub-soil, clay.
Delhi	Not necessity	One canning factory, 125 hands; 1 tannery, 6 hands; glove factory, 8 hands; saw and grist mill, 12 hands; grist mill, 2 hands.	Sandy loam

VILLAGES.—*Continued*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal.	State number and kind of noxious trades. How licensed and regulated? (See sec 63 Public Health Act.)
None	One; no license; offal fed to pigs.	Householder.....	No sewage system; some dry earth closets.	None.
About 30; no inspector.	No slaughterhouses.	Householder.....	Dry earth closets ...	None.
None	None	By householder	No sewage system..	None.
.....	Two not licensed; offal burnt.	By householder	Dry earth closets; no contract.	None.
None	Two; offal carted away.	By contract	... .	None.
Twenty cows; no inspector.	.....	By householder	Privy pits....	None.
.....	One slaughterhouse.	By householder	.....	None.
Sixty-five; no.....	None inside corporation.	Burried and put on land by householder.	.....	Cheese factory in a very unsanitary condition said to have caused malerial fever.
110 dairy cows; no medical or veterinary inspection.	None in corporation.	By householder	.....	....
Sixty; no; none...	None in village.....	Householders	Honseholders; under direction of Board of Health.	None.
None	None	By householder	No sewage system..	None.

VILLAGES.—*Continued.*

Municipality.	Names of M.H.O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Drayton	R. Lucy, M.D.; D. Roberts, sanitary inspector.	Personal inspection once a year.	Typhoid, 17 cases
Exeter	T. A. Amos, M.D.; James Creech, sanitary inspector.	Yearly inspection from house to house.	Typhoid, 5 cases
Eganville	H. Irwin, M.D.; J. C. Pilatzke, sanitary inspector.	Inspection made twice a year	Scarlatina, 4 cases; diphtheria, 3 cases.
Embro	J. Ross, M.D.; G. C. McKay, sanitary inspector.	General inspection made once a year.	No contagious diseases during the year.
Elmira	H. Ullyot, M.D.; Henry Heipel, sanitary inspector.	General inspection in May and September.	No contagious diseases
Erin	H. Greer, M.D.; J. Felker, sanitary inspector.	Sanitary inspector makes an inspection twice a year.	No contagious diseases
Hagersville	Robert McDonald, M.D., and sanitary inspector.	By Board of Health; 2 inspections.	Scarlatina, 2 cases; typhoid, 8 cases.
Holland Landing	Dr. Stephenson, M.H.O.	No general inspection	Diphtheria, 5 cases; typhoid, 3 cases.
Hintonburg	Dr. Troy, M. H. O.; Thomas Lewis, sanitary inspector.	Thorough inspection during May.	Scarlatina, 11 cases, 3 deaths; diphtheria, 43 cases, 3 deaths.
Huntsville	F. L. Howland, M.D.; J. W. Gledhill, sanitary inspector.	House to house inspection	Scarlatina, 12 cases; diphtheria, 2 cases; typhoid, 4 cases.
Newburgh	M. J. Berman, M.D.; J. M. Taylor, sanitary inspector.	Inspector instructed to make personal visits to all residences.	No contagious diseases, a few cases of malaria.
Norwich	E. W. Glover, sanitary inspector.	House to house inspection	Typhoid, 22 cases, 3 deaths

VILLAGES.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
No hospital	No	Usual methods . ..	One school	210 cubic feet .... .
....	No ; general in 1894.	.....	One school ; 7 roo;ms attendance, 46 in each room.	270 cubic feet .....
No hospital	No vaccination; school children, 223	Carried out under direction of M. H. O.	Two schools.....	About 190 cubic feet.
No hospital ; usual methods.	General vaccination in 1894.	Usual methods	One school	....
No hospital	No	.....	One school ; 5 rooms.	247½ cubic feet.....
No hospital	Yes.....	....	One school ; 3 rooms.	..... .
Houses placarded soon as disease is discovered.	Yes ; about 230 ; 20 vaccinated.	By fumigation.. ...	One public school, 4 rooms, average attendance in each 40. High school, 3 rooms, average attendance 30.	Cannot say.....
Isolated at their own house.	Vaccination has not been compulsory.	.....	Two schools	....
County contagious disease hospital, Ottawa.	No.....	Under supervision of M. H. O.	One public school, 1 separate school.	....
Small isolation hospital.	No.....	Usual methods	One school	.. ..
..... .	No ; none	... .	High and public in one building, 3 rooms in each. High school, 80 in 3 rooms ; public, 30 in each room.	.....
No hospital ; usual methods.	Vaccination not compulsory ; school children, 223 ; none vaccinated.	Disinfection under supervision of Board of Health.	One school, attendance 200.	200 cubic feet .....

VILLAGES.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Drayton	No forms	Two factories, 30 employees.	Wells and springs
Exeter	No	Two planing mills, 8 hands; 1 woollen mill, 4 hands; 1 foundry, 5 hands; 1 flax mill, 20 hands; 1 carriage shop, 4 hands; 1 carriage shop, 3 hands; 1 grist mill, 6 hands; 1 saw mill, 4 hands; 1 tannery, 4 hands.	Spring wells; blue clay and gravel.
Eganville	Yes		Wells and river; soil, sandy loam.
Embro	Yes; both are supplied.	One flax mill, 30 employees.	Wells
Elmira	Yes	Cabinet factory, 10 employees; woollen factory, 10 employees; felt boot, factory, 14 employees; foundry, 12 employees.	Wells. soil, clay-loam; subsoil, gravel.
Erin	Yes		Wells
Hagersville	Yes; yes	One sash and door factory, 4 hands.	Wells; gravel and clay loam.
Holland Landing	No	None	Wells; good supply of water.
Hintonburg	No	None	Wells
Huntsville	No	One woollen mill, 6 hands; 1 tannery, 75 hands.	Wells
Newburgh		One carriage shop, 14 hands; 1 foundry, 7 hands; 1 tannery, 4 hands.	Wells and springs of good quality.
Norwich	Forms supplied to physicians.	Flour mill, 4 hands; machine shop, 3 hands; cider factory, 5 to 20 hands; broom factory, 10 hands; cooperage, 2 hands.	Wells

VILLAGES.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal.	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.)
Thirty-seven dairy cows; no inspection.	None	Householder	No regular system ..	No.
None	None in village	By householder	A few dry earth closets.	None.
.....	None in village	By householder	....	None.
About 50 cows; no inspection.	Two; licensed; offal fed to pigs.	By householder	Dry earth closets ...	None.
.....	One slaughterhouse.	By householder	.....	None.
....	Two	By householder	.....	None.
Fourteen; no inspection.	Two; outside of municipality; none licensed.	Carried outside of limits and burned.	Dry earth closets ...	None.
Sixty cows; no inspection.	None	By householder.....	Dry earth closets ...	None.
No inspection	None	By contract	Night soil removed by contract.	None.
No inspection; about 80 cows.	None in municipality.	By householder.....	Partly dry earth closets.	None.
.. ..	One about 40 rods from any building.	By householder.....	All kinds of closets cleaned by householder.	None.
Fifteen cows.....	One slaughterhouse; offal fed to pigs.	By householder.....	A few dry earth closets; chiefly privy pits.	None.

VILLAGES.—*Continued.*

Municipality.	Names of M.H.O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Newcastle	A. Farncomb, M.D.	General inspection once a year.	Typhoid, 4 cases
Paisley	John McMahon, sanitary inspector.	Go over the place personally.	Typhoid, one case
Portsmouth	R. J. Darrogh, M.D.; F. McIlwain, sanitary inspector.	House to house inspection by sanitary inspector.	None
Port Dalhousie	J. W. Considine, M.D.	Two or three times yearly	Diphtheria, 8 cases; typhoid, 1 case.
Port Perry	G. H. Clemens, M.D.; Robert McKnight, sanitary inspector.	House to house inspection	Diphtheria, 5 cases, 1 death; typhoid, 15 cases.
Port Stanley	L. I. Mothersell, M.D.; Jas. Payne, sanitary inspector.	House to house inspection	None
Port Elgin	Henry Becker, M.D.; George Henry, sanitary inspector.	House to house inspection by inspector.	
Point Edward	A. N. Hayes, M.D.; Angus McKinnon.	General inspection	Diphtheria, 8 cases; typhoid, 22 cases.
Stouffville	J. A. Freel, M.D.; Samuel Mighton, sanitary inspector.	House to house inspection	Typhoid, 10 cases
Sutton	T. B. Bentley, M.D.; E. F. Earl, sanitary inspector.	General inspection made of yards, lanes, privies, etc.	Diphtheria, 24 cases, 2 deaths.
Springfield	A. F Tufford, M.D; Wm. Rivere, sanitary inspector.	Sanitary inspector makes thorough inspection.	Typhoid, 2 cases
Stirling	J. S. Sprague, M.D.; S. Brown, sanitary inspector.	General inspection	
Streetsville	J. H. Davidson, sanitary inspector.	House to house inspection twice a year.	Diphtheria, 6 cases

VILLAGES.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895?	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
.....	....	Usual methods	One school	Well ventilated ....
Placard and isolate the houses.	No; not many	Smoke with sulphur.	One school, 6 rooms; about 60.	.....
Not required	Not enforced this year.	No special means ...	Three; 32; 42; 32; 106.	311 cubic feet .....
None	None	Under the attending physicians' directions.	.....	.....
Separate rooms in upper story if possible; no isolation hospital.	No; 418; no vaccination.	Ordinary means of disinfection employed.	Two buildings; public school average attendance, 268; high school average attendance, 91.	....
None	o; 200; 10 vaccinated.	None required.....	One school, 2 rooms; 55 and 60.	242 cubic feet.....
Isolation at home only.	.....	.....	....	....
No hospital.....	No vaccination	Usual methods	.....	....
Under care of the members of family.	No; 265, none	Carbolic acid and bi-chloride of lime and sulphur fumes.	One; 5 rooms; 50..	More than required space.
No isolation hospital; patients isolated in their homes and houses placarded.	No; 246; between 5 and 21; none vaccinated.	Inmates in some cases are removed; houses disinfected; bedding and clothing burned; sulphur burned, etc.	One school; 3 rooms; average attendance 40, 50, and 60.	560; 290; 240 .....
No isolation	Vaccination compulsory.	No disinfection	One school; 3 rooms.	....
No hospital	190 children	Nothing done	One public school; 1 high school.	Public school, 242 feet; high school, 262 feet.
No hospital	178 children	Disinfection by means of sulphur fumes and steam.	One public school; 1 high school.	Public school, 230 feet; high school, 610 feet.

VILLAGES.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Newcastle			Wells
Paisley		Two woollen factories	Clay soil; gravel sub-soil
Portsmouth	No forms	One brewery, 5 hands; 1 forwarding Co., 20 hands; Kingston Penitentiary, 613 inmates; Rockwood hospital, 655.	Wells and lake
Port Dalhousie	Not required	Rubber factory, employing 200 hands.	Wells and water from lake
Port Perry	None supplied this year; none used.	One foundry, 15 hands; 2 planing factories and grist mill, 15 hands.	Wells entirely; clay loam; gravel sub-soil.
Port Stanley	No forms supplied	One saw-mill and handle factory.	Wells; sandy loam and gravel.
Port Elgin	No forms		
Point Edward	Forms supplied		Wells
Stouffville	Printed forms; yes; yes.	Two planing factories, 1 vinegar factory, 1 foundry, about 5 hands in each.	Wells; clay
Sutton	Supplied to doctors; not always made use of.	Three factories, shingle and saw mills, 10 hands; planing factories, about 6 hands.	Wells; soil sandy sub-soil, clay and gravel.
Springfield	No forms		
Stirling	None supplied	No factories	Wells; clay loam
Streetsville	Forms supplied to physicians.	No factories	Wells; supply good

VILLAGES.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal.	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.)
100 cows; no inspection.	One slaughterhouse.	By householder.....	.....	None.
None	No slaughterhouses inside corporation.	By householder.....	Some dry earth closets.	None.
Twenty-eight; no ..	None	By householder usually.	Chiefly pits; no contract.	None.
About 30; no examination.	One; no license.....	By householder.....	None; old closets; no dry earth.	None.
None; no	None	By householder.....	Pits and dry earth closets; no contract removal.	None.
None	One; drained into Kettle Creek; offal fed to hogs (boiled).	No contract; by householder.	Chiefly pits; no contract.	None.
.....	.....	....	.....	.....
Twenty-four; no inspection.	No slaughterhouses.	By householder.....	Number of dry earth closets.	None.
None; no	Two; none; no drainage.	By householder	No regular or proper sewage.	None.
102; no examination of herds for tuberculosis.	Two; well isolated; none licensed; offal fed to pigs after being boiled.	By householder	Mostly by dry earth closets.	None
No cows; no inspection.	One slaughterhouse.	By householder	.....	None.
141 cows; no inspection.	Two slaughterhouses.	By householder; great carelessness upon part of householder.	No contract removal.	None.
10 cows; no inspection.	Two slaughterhouses; offal fed to hogs.	No contract removal.	Some dry earth closets.	None.

VILLAGES.—*Concluded.*

Municipality.	Names of M. H. O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Tara	No M. H. O.; L. G. Briggs, sanitary inspector.	House to house inspection	None reported
Tweed	W. M. Mattron, MD.; Thos. Beatty, sanitary inspector.	House to house visits by sanitary inspector.	Scarlatina, 18 cases; typhoid 1 case.
Teeswater	John Gillies, M.D.; A. G. Brown, sanitary inspector.	General inspection	Typhoid, 1 case.
Thedford	W. A. Munns, M.D.; J. Robinson, sanitary inspector.	House to house inspection	
Tilbury Centre	M. Sharpe, M. D.; G Keith, sanitary inspector.		
Woodbridge	No M. H. O.; George Blake, sanitary inspector.	Sanitary inspector goes from house to house.	None
Watford	R. A. McHenry, M.D.; A. Mathews, sanitary inspector.	Personal inspection by sanitary inspector.	Scarlatina, 1 case; typhoid 5 cases.
Winchester	R. Reddick, M.D.; J. M. Erratt, sanitary inspector.	General inspection made twice a year.	Scarlatina, 6 cases
Waterford	F. Snider, M. D.; W. B. Goodwin, sanitary inspector.	None	
Waterdown	Dr. McClenahan; John Smiley, sanitary inspector.	House to house inspection once a year.	Typhoid, 4 cases
Woodville	John Grant, M.D.		

VILLAGES.—*Concluded.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
None	No; 152; none reported vaccinated.	Only private disinfection carried out	One; 3; about 40 to each room.	Ample .....
No isolation hospital; isolated as well as possible in private houses.	Yes; about 200 vaccinated.	Sulphur fumes, chloride of lime, carbolic acid, etc.; woodwork washed.	Two; senior division, average 33; intermediate, 43; junior, 49; separate, 30.	207; 152; 146; 250 cubic feet respectively.
Houses placarded; no hospital.	No vaccination.....	....	Two schools	....
No hospital	About 80 children; 45 children vaccinated.	Disinfection under the direction of the Medical Health Officer.	....	.....
No hospital	.....	....	One public school; 1 separate school.	390 cubic feet .....
None	About 140; no vaccination.	None	One school; 4 rooms; average 20 to 85...	.....
No isolation hospital; isolation in different parts of the house sent to London General Hospital.	No; none vaccinated this year.	Burning of sulphur..	One Public School; 5 rooms; 40 in each; 1 High School, 6 rooms.	210.... .....
No isolation hospital.	. .. .	Usual methods adopted in such cases.	One Public School ..	.....
No hospital	No	....	Two schools	.....
....	.....	Under charge of physicans.	One school, 5 rooms; 60 pupils in each room.	....
None	No	... .	One school, 2 rooms; average attendance in each, 115.	.....

VILLAGES.—*Concluded.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub soil.
Tara	None; no; no.	One foundry, 10 hands; 1 woollen factory, 5 hands; 1 roller mill.	From wells; soil heavy clay.
Tweed	None supplied	One dynamite factory, 2 hands; 1 cheese factory, 3 hands; 1 grist mill, 5 hands; 1 sash and blind factory, 6 hands.	By wells altogether; gravelly soil with rock bottom.
Teeswater	None supplied	Two saw mills; 1 tannery, 3 hands.	Wells
Thedford			Wells
Tilbury Centre		One saw mill, 9 hands; 1 handle factory, 25 hands; 1 saw mill, 6 hands; 1 flour mill, 5 hands; 1 foundry, 3 hands.	Wells; clay loam
Woodbridge	None used	One woollen mill, 10 hands	All wells; clay soil
Watford	Written notice sent	One sash and door factory, 10 hands; 1 foundry, 15 hands; 1 woollen factory, 5 hands.	Wells, and small waterworks system.
Winchester	Yes	Two factories	Wells
Waterford			
Waterdown	No	Two factories	
Woodville		No factories	Wells

VILLAGES.—*Concluded*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal.	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.)
None; no; none....	None in municipality.	By householder	By dry earth closets and privy pits under supervision of sanitary inspector.	None.
None in municipality.	One; drained into lake; offal buried.	By householder; a dumping ground provided by corporation.	By householder ...	None.
.. ..	Two slaughterhouses.	By householder; privy pits.	... .	None.
Nothing done in this matter.	None	By householder	.....	None.
....	None	By householder	.....	None.
Not any	Three; all got permission from council as long as they complied with the requirements; offal drawn away.	By householder	Dry earth closets; no contract.	None.
Ten; no inspection..	None in corporation.	Carted onto farm property outside village by men employed by householder.	Ordinary drainage by sewers.	None.
No inspection	None in corporation.	By householder	Principally earth closets.	None.
....		By householder	....	None.
No inspection	....	By householder	.....	None.
....	.....	By householder	.....	None.

TOWNSHIPS.

Municipality.	Names of M. H. O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Amaranth	F. W. Lewis, M.D	None considered necessary	Typhoid, 1 case
Ashfield	James McKay, M.D.; R. A. Carrick, sanitary inspector.		Typhoid, 2 cases, 2 deaths
Artemesia	J. G. Hutton, M.D.		Scarlatina, 4 cases, 1 death; diphtheria, 10 cases, 2 deaths; typhoid, 1 case.
Athol	None	None	
Alnwick	J. C. Lapp, M.D.; James Roberts, sanitary inspector.	Some years house to house inspection. This year only where called upon.	Scarlatina, 2 cases
Algona, South	James Reeves, M.D.; three sanitary inspectors.		Diphtheria, 13 cases, 9 deaths; scarlet fever, 5 cases, 1 death.
Ancaster	G. D. Farmer, M.D.; R. O'Hara, sanitary inspector.	House to house in villages, also dairies, slaughter-houses, cow byres, etc.	Scarlatina, 16 cases; diphtheria, 6 cases; typhoid, 7 cases. All not reported.
Arran	James Taylor, M.D.; A. Neelands.	Personal inspection	Scarlatina, 22 cases, 4 deaths; diphtheria, 5 cases, 1 death.
Anderdon	T. J. Park, M.D.; D. Mongeau, sanitary inspector.	Inspection by health officer	Diphtheria, 2 cases, 2 deaths; typhoid, 2 cases, 2 deaths.
Albemarle	— Fisher, M.D.; J. Canoford, sanitary inspector.	No general inspection	None

TOWNSHIPS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
No isolation hospital. Strict isolation of families.	No; 702; from 5 to 16; none reported.	Not satisfactory, except in diphtheria.	Twelve, one room in each.	About 490 feet.....
None	No	....	Sixteen; 18	....
No isolation hospital. Patients are isolated in their homes. Notices are attached to the door.	....	All refuse burned, bed clothing and wearing clothing are washed in carbolic water, houses thoroughly fumigated with sulphur, woodwork washed with a solution of bi-chloride, and walls all whitewashed.	Fourteen schools....	Don't know .....
None	No	No	Seven schools, one room in each.	.....
None	No; none	Stools disinfected with bi-chloride, also clothes and bedding, walls washed, rooms fumigated with sulphur.	Three; 4 rooms; attendance 35, 35; 2 rooms 65.	270 cubic feet.....
.....	.....	....	.....	....
No isolation hospital. Houses placarded and patients isolated as far as possible.	....	According to rules laid down in pamphlet No. 1.	Fourteen; twelve has one, one has three, and one two.	....
Quarantined in their dwellings.	Yes; 964; over 300	.. ..	Eleven schools, 2 room in one, the others one in each.	....
. ...	None	....	Nine schools, one room.	. .....
....	....	.....	Eight schools, one room in each.	. ...

TOWNSHIPS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Amarouth	None supplied	One cheese factory, 3 hands	Wells chiefly; clay loam sub-soil; gravelly bottom.
Ashfield	None used	Two cheese factories, 2 hands in each.	Wells; soil, clay and gravel.
Artemesia	Yes; supplied to M.D.	Two cheese factories; 2 woollen factories; 4 sash and door factories; employees, about 3 in each.	Wells; clay; sub-soil, gravel.
Athol	No		
Alnwick	None	None	Loam and heavy clay
Algona, South			
Ancaster	Printed forms; when required; they do.	Two cheese factories; 1 lime kiln.	Wells; sand, loam and clay.
Arran		Two cheese factories	
Anderdon	No	None	Clay sub-soil
Albermarle	No	None	Spring, lake and well water.

TOWNSHIPS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal?	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.)
About 2,000	None	Burned by householder.	No dry earth closets.	None.
... .	Two licensed; offal fed to hogs.	By householder	....	None.
Don't know; No....	None licensed; two or three in Township; offal fed to hogs.	By householder	.....	Slaughtering of animals not licensed or regulated in any particular way.
.....	....	....	... .	.....
No	None	By householder	.....	.....
.. ..	.....	....	....	.....
Inspection by M. H. O.; no bacteriological examination for tuberculosis.	None licensed	By householder	....	Cheese factories and dairies are licensed by L. B. H.
....	Two isolated	By householder	Partly by dry earth closets.	None.
Two horses had glanders and were destroyed by orders of vet. surgeon.	No	No	.....	.....
....	None	.....	....	None.

TOWNSHIPS.—*Continued.*

Municipality.	Names of M.H.O. and sanitary inspector.	State, extent and methods of general inspection.	Contagious diseases.
Aldborough	S. Dorland, M. D.; Three sanitary inspectors.	Inspectors make a general inspection and enforce sanitary regulations.	Scarlatina, 6 cases
Arthur	A. J. Reynolds, M.D.	Ordinary	Diphtheria, 10 cases, 5 deaths; typhoid, 4 cases, no deaths.
Admaston	T. D. Gilligan, M.D.		Township has been free from any contagious diseases dur the year 1895.
Anson and Hindon	C. D. Curry, M.D	None, except on complaint being made.	Diphtheria, 6 cases.
Albion	Samuel Allison, M.D.		
Ameliasburg	A. J. File, M.D.; T. H. Thornton; no sanitary inspector.	When complaint is made an enquiry is made by the board.	Scarlatina, 3 cases; diphtheria, 2 cases; typhoid, 2 cases.
Amabel	— Campbell, M.D.		
Assiginack	No M. H. O; Wm. Sinze, sanitary inspector.	Inspector is constantly attending his duties.	Diphtheria, 1; typhoid, 1
Ashpodel	P. McNaughton, M.D.		No contagious diseases reported this year.
Barrie Island	None	None	None
Burpee	J. Johnston, M.D.; Colin Bailey, sanitary inspector.		None
Blandford	E. Bromley, M.D.; — Wellford, M.D.		None
Burgess, N.	A. Turner, M.D.		

TOWNSHIPS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
Thorough as far as known. No isolation hospital.	In the past; yes...	Carbolic acid vaporized.	Fourteen schools; 20 rooms; average attendance 40.	250 and upwards....
Ordinary	No	Fumigation, carbolic acid and turpentine.	Fourteen schools; average attendance 35.	....
.....	.....	.....	....	....
No hospital	No; 125; none	Clothing of no use burned, also bedding boiled and exposed to sulphur fumes.	Two schools; 4 rooms; attendance 15, 30, 35 and 40.	260 feet .....
....	Not compulsory. Number of school children 780.	... .	Twelve schools.....	.. ..
Houses where disease exists are quarantined.	Not for the last four or five years. 835. None.	The ordinary methods as ordered by M. H. O.	Fifteen schools; 16 rooms; from 35 to 45 in each.	600 cubic feet. .....
.....	No. None.	.....	Fourteen; 13 having one room each.	... .
No hospital. A vacant dwelling is used when necessary.	No. Very few have been vaccinated.	Disinfection is done under Dr. Stephen's instructions.	Six; average attendance 30 in each.	.....
.....	.....	.....	.....	.....
None	Don't know	Exceptionally healthy.	One; 1 room; about 20.	....
No hospital; no cases to isolate.	No.; 48.....	.....	Two; 1 room in each.	Don't know .....
No hospital.....	Have been trying to make it compulsory, but find almost impossible.	.....	Six; 1 room in each.	Cannot say.....
.....	.....	.....	Nine	....

TOWNSHIPS.—*Continued.*

Municipality.	Forms of notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Aldborough	Yes; when necessary.	Canning factory, from 3 to 100 hands; cheese factory, 5 hands; stove factory, from 15 to 25 hands.	Wells and creeks; surface water.
Arthur	Yes	Two cheese factories, 3 hands in each.	Water supply in abundance; soil, clay loam.
Admaston			
Anson and Hindon	No	None	Sandy loam; sub-soil, gravel and quicksand.
Albion	Cannot say	None	
Ameliasburg	Yes	Four evaporating factories, 10 to 20 hands employed during the season; 5 cheese factories, 3 hands in each.	Wells; clay loam with lime-stone.
Amabel		None	
Assiginack	No	One shingle and planing mill, 3 hands.	Sub-soil mostly white clay, mixed with lime stone.
Ashpodel			
Barr's Island	None	None	Wells; clay loam, clay sub-soil.
Burpee	No	None	Clay soil
Blandford	No; no	None	Part of township is sand and part clay.
Burgess, N.			

TOWNSHIPS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal?	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.)
Two dairies, 11 cows in each; no veterinary or medical inspection.	Two isolated; drainage good and offal properly disposed of.	Applied as fertilizer; by contract with householder.	No system of sewage in Municipality; disposed of by putting on isolated lands.	.....
Don't know the number of cows.	None	.....	.....	.....
.....	.....	.....	.....	.....
225; no inspection; no tuberculosis.	None	Householder.....	None	.....
....	None licensed	.....	.....	.....
1,500; no	Four; none licensed; either buried or burned.	Carefully disposed of by householder.	....	None in municipality.
None	None	.....	.....	.....
....	One; no license	By householder.....	No contract	None, except one slaughterhouse.
....	....	....	.....	.....
Cows kept by farmers; no regular dairy.	None	None; closets cleaned occasionally.	... .	None.
No dairies.....	None	By householder.....	.....	None.
None; only a few in Bright kept by private families.	Two or three in the township; no license.	....	.....	.....
None.....	None	....	.....	....

TOWNSHIPS.—*Continued.*

Municipality.	Names of M.H.O. and sanitary inspector.	State, extent and methods of general inspection.	Contagious diseases.
Barton	H. Bryant, sanitary inspector.	Inspection by the sanitary inspector. Important cases are brought to the notice of board.	....
Binbrook	J. W. Smuck, M.D...	Inspected when complaint is made.	3 cases of scarlatina under notice of M. H. O.
Brunel	J. W. Hart. M.D.....	.....	Typhoid, 6 cases.....
Burford	Robt. Harbottle, M.B.; D. R. Hamilton, sanitary inspector.	Sanitary inspector has seen a number of butchers and inspected one slaughter house, and attended to any complaints.	Scarlatina, 2 cases; diphtheria, 1 case; typhoid, 8 cases.
Bangor	.....	....	None .....
Bromley	A. J. Sparling, M.D..	There has been no general inspection, and only when complaint is made.	Scarlatina, 2 cases .....
Bentinck	No M.H.O.; John Small and Chas. Bohnsack, sanitary inspectors.	Inspection has been general..	Scarlatina, 8 cases; diphtheria, 4 cases; typhoid, a few cases.
Bertie	Jacob Walrath, M.D.; Jas. J. Moore, A. Ratenburg, George Graham, sanitary inspectors.	Annual inspection in May. Inspection on complaint thereafter.	Scarlatina, several cases; diphtheria, several cases, 5 deaths; typhoid, 5 cases, no deaths.
Brook	A. MacKinnon, M.D.; E. Bowlby, sanitary inspector.	Inspection is thorough	Scarlatina, some 8 cases; typhoid, a few mild cases.

TOWNSHIPS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
No isolation hospital.	No.....	.....	Seven schools; 1 room in each; No. 1, 20 to 25; No. 2, 45 to 50; No. 3, 48 to 52; No. 3, union, 25 to 30; No. 4, 40 to 45; No. 5, 40 to 45; No. 6, 50 to 55.	From 130 feet to 1,000.
No hospital; home isolation.	No; about 300; none vaccinated.	Bichloride disinfectant under direction of M.H.O.	Six schools, 7 rooms.	.....
No hospital; M.H.O. attends to this matter.	Not this year; last year 348.	.....	Seven; about 50	.....
The physicians attending patients isolate them as best he can.	No.....	Usually by washing and house cleaning generally.	Twenty-five schools; usually 1 room.	Don't know .....
.....	.....	.....	Five; five rooms; No. 1, 20; No. 2, 30; No. 3, 58; No. 4, 18; No. 5, 53.	Average 144 .....
Placards placed on house and visitors excluded.	No vaccination done this year.	Houses thoroughly washed; disinfected generally by burning sulphur, etc.	.....	.....
No isolation hospital; contagious diseases are isolated by sanitary inspector and attending physician.	No compulsory vaccination; number of school children 1,711.	Attending physicians give instructions as to the mode of disinfection.	Thirteen schools; 19 rooms.	Cannot give .....
Placards; schools closed; isolation of households affected.	No vaccination, by order of board this year.	M.H.O. orders the clothing and bedding disinfected and boiled; stools buried after disinfection; rooms fumigated; lime and carbolic acid used freely. In diphtheria, antitoxine was used by some physicians with apparent success in some cases.	Twelve schools; 15 rooms.	.....
Not necessary in 1895.	No; about 1 in 5 is vaccinated.	.....	Nineteen schools; 20 rooms.	.....

TOWNSHIPS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Barton	No	None	Clay loam, rock bottom
Binbrook	Yes		Wells; clay loam
Brunel		None	Sandy loam; hard pan and rock.
Burford	Physicians supplied; teachers send a post card to M.H.O.	One canning factory, employing from 6 to 100 hands.	Usually wells
Bangor		One cheese factory; two hands.	Clay loam and hard pan
Bromley			
Bentinck	Supplied to physicians; no; they notify personally or by post card.	One furniture factory, 1 felt boot factory, one spring bed factory; about 200 employees.	Wells; spring creeks; soil clay loam; sub-soil gravel and sand.
Bertie	Not generally used	No factories	Wells; many of them are drilled in the rock; others in varable soil.
Brook			All wells

TOWNSHIPS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal?	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.)
Cannot say; no veterinary inspection.	Ten; offal in some cases boiled and fed to pigs.	....	Common privies	None.
Farm herds; no inspection.	One; not licensed...	Individual disposal by householder.	.....	None.
No large herds; only a few kept by farmers.	None.....	Householder.....	Dry earth closets ...	....
No medical inspection; veterinary inspection when owner suspects anything wrong.	Variable numbers, according to season; none licensed.	Buried, or used as land manure by householder.	No sewage system ..	Slaughterhouses; none licensed or regulated.
No veterinary inspection.	One; not licensed; drained into a creek.	By householder.....	None.....	None.
.....	.....	.....	.....	.....
None in the township.	Two; none licensed.	By householder.....	None.....	None.
But few dairy cows; no special inspection.	None licensed	By householder.....	No system.....	None.
.....	One.....	.....	.....	.....

TOWNSHIPS.—*Continued.*

Municipality.	Names of M. H. O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Bosanquet	D. McEdwards, M.D.	Inspected cheese factories and slaughter houses.	Scarlatina, 16 cases, 1 death.
Barrie	— Caldwell, M.D.		Not any
Bexley	C. N. Laurie, M.D		
Beverly	J. T. Manes, M. D.; E. Clement, sanitary inspector.	No regular methods of inspection only when the inspector or M. H. O. are notified.	Typhoid fever, 34 cases
Blenheim	Have a M. H. O., but no sanitary inspector.	Township is divided into three divisions and the board into three committees.	Diphtheria, 13 cases, 1 death; typhoid, 38 cases, 1 death.
Brock	McDermott & Jardine, M.D's.; R. R. Bryant, sanitary inspector.	Inspection made twice during the summer, and other times if required.	Scarlatina, one case; diphtheria, four cases; typhoid, three cases.
Bedford	Wm. Parker, M. D		Diphtheria, one case
Binbrook	J. W. Smuck, M.D.	Inspection when complaints are made	Scarlatina, three cases, under notice of M. H. O.
Carrick	R. E. Clapp, M.D.; Wm. Clenhim, sanitary inspector.	House to house inspection of all villages, school houses, creameries, etc.	Diphtheria, a few cases; typhoid, about 20 cases.
Carlow			
Cockburn Island	None		None

TOWNSHIPS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
Isolated in homes...	Yes; nearly all vaccinated.	Stools buried after disinfection; after convalescence sulphur is burned in rooms infected.	Thirteen; one room in each.	.....
Not any.....	No vaccination this year.	Not any.....	Seven schools; 1 room in each; attendance from 15 to 25 in each school.	.....
Isolated in their houses; no hospital.	Yes.....	Houses placarded, and inmates not allowed to mingle with the public.	Six schools, 1 room, average attendance from 12 to 40.	.....
No isolation hospital.	No	The usual disinfectants, carbolic acid, chloride of lime, etc. All rooms are disinfected; secreta is disinfected before being disposed of.	Fifteen schools, 13 of these have 2 rooms.	Don't know .....
No isolation hospital; houses are placarded; visitors not allowed to visit.	Don't know number vaccinated; 998 in municipality; vaccine was supplied the physicians in 1894	Cannot say	Seventeen schools, 21 rooms.	Cannot say .....
No isolation hospital; don't allow any person to mingle with families having contagious diseases.	No; none	Thorough isolation of all cases.	Nineteen; 22; average 45.	.....
None required	No; about 600; none in 1895.	.....	Twelve; 6 has 2 rooms, 6 has 3 rooms.	About 350.....
No hospital; home isolation.	No; about 300; none vaccinated.	Bichloride under direction of M. H. O.	Six; 7 rooms	.....
No isolation hospital; isolation from the other members of the family.	Yes; about 100	Fumigation and disinfection.	Twenty; 27; not known.	Not known .....
No hospital	No; 94	.....	Four; 4; from 10 to 20.	.....
....	No vaccination performed.	....	Two; 1 room in each.	400 in No. 1, 350 in No. 2.

TOWNSHIPS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Bosanquet	Yes; yes	One cheese factory; 3 hands employed.	Clay loam
Barrie	Not any supplied	None but cheese factories; 2 to 4 hands in each.	Good water supply; sandy soil.
Bexley	Not required	Not any	Loamy and clay sub-soil
Beverley	Not supplied	None	From wells; clay soil; nearly all wells are rock drilled.
Blenheim	Physicians supplied; some use them.	One cheese and 1 chair factory.	Soil, sandy loam; sub-soil, clay and gravel.
Brock	Yes; yes	Two factories, 4 in each	Wells; clay and gravel
Bedford			Wells; mostly clay soil
Binbrook	Yes	A rural municipality	Wells; clay loam
Carrick	None; no; notice in writing is given.	One factory and a few employees.	Wells; clay soil and quick sand.
Carlow	No; no	One cheese factory	Mostly wells; loam and hard-pan.
Cockburn Island	No	None	Some running creeks, others use wells.

TOWNSHIPS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal?	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.)
Cattle free from disease.	One; not licensed ..	.....	.....	.....
About 400 cows; no inspection.	No slaughterhouses .	By householder.....	....	.....
No large dairies; no inspection or examination.	None	By householder	Common closets above ground.	....
Don't know number; no inspection.	Three on small scale; offal burned.	By householder	No contract removal.	....
Cannot give number; no examination of herds for tuberculosis.	None licensed; offal fed; used as manure.	By householder	.....	.....
Each farmer has from 6 to 12 cows; no O. S. inspection.	One; none; buried.	By householder; burnt and buried.	Privy pits, some dry earth closets.	....
One dairy, 40 cows; no inspection.	None	By householder	Dry earth	.....
Farm herds: no inspection.	One not licensed....	Individual disposal by householder.	.....	.....
.....	Four; 4; burned ..	Buried by householder.	Dry earth closets in villages.	None.
500; no	None	Householder.....	No contract removal.	None.
No inspection	None	Householder.....	.....	.....

TOWNSHIPS.—*Continued.*

Municipality.	Names of M. H. O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Cartwright	W. A. Fish, M.D	Members of Board inspect twice a year.	None
Claradon and Mills	None	None	None
Charlottenburg	Falkner, M. D.; L. Cattanaugh, sanitary inspector.	Creameries, cheese factories and slaughterhouses are carefully inspected.	Diphtheria, 1 case, 1 death
Culross	Gillies, M.D		Diphtheria, 5 cases, 2 deaths.
Charlotteville	W. J. McInnis, M.D.; A. Wood and T. L. Roberts, sanitary inspectors.		None reported
Clarence	N. Desrosiers, M.D	General inspection every spring.	Scarlatina, 100 cases, 25 deaths; diphtheria, 40 cases, 8 deaths; typhoid fever, 200 cases, 3 deaths.
Caistor	De La Malter, M.D.; Ed. Gillespie, sanitary inspector.	Attended to by sanitary inspector.	Diphtheria, 5; typhoid, 2
Crosby, North	D. E. Foley, M.D.; Owen Martin sanitary inspector.	Sanitary inspector makes inspection in the spring and special when complaint is made.	Scarlatina, 1 case
Chaffey	F. L. Howland, M.D.; W. H. Lehman, sanitary inspector.		Scarlatina, 4 cases, 1 death; diphtheria, 4 cases, 2 deaths.
Collingwood	S. H. Large, M.D.; E. Dickinson, sanitary inspector.	Personal inspection by sanitary inspector.	Typhoid, 6 cases
Chapman	P. D. Tyreman, M.D.	All members of the board acting sanitary inspectors.	None
Christie	J. P. Waddy, M.D	Township is divided into districts, each member looks after his division.	Diphtheria, 11 cases
Cardwell	Robinson, M.D		None

TOWNSHIPS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
By placarding premises and prohibiting children from attending school.	No vaccination performed.	By using chloride of lime; burned sulphur.	Nine schools, 1 room in each, attendance from 25 to 40.	....
No hospital	None	None	Eight; eight.	.....
No hospital; no....	No	Sulphur fumigation.	Twenty-three; 21 have one room and 2 have 2 rooms each.	....
No hospital; houses placarded, etc.	No; don't know....	.....	Eleven schools, 1 room in each.	....
....	.....	.....	.....	.....
....	.....	.....	.....	.....
None; isolation by placarding houses.	No	By disinfecting the discharge of bowels, etc.	Nine; nine	....
No, excepting placarding houses.	No	.....	Twelve	... .
No hospital	Generally done in 1894, none in 1895.	Chloride of lime and sulphuric acid.	Ten, 1 room in each.	....
None; no hospital..	No	Sulphur fumigation; washing walls and floors with bichloride, etc.	Sixteen schools; 17 rooms.	....
None; none.....	No; about 240 school children; about 25.	No contagious diseases in 1895.	Three; 3 rooms, attendance 15, 30, 75.	381 .....
No hospital; houses placarded and isolated.	All children were vaccinated in 1894; number of school children, 80.	Houses are disinfected with sulphur under supervision of member of Board of Health.	Four; 4; attendance No. 1, 3; No. 2, 25; No. 3, 2; No. 4, 14.	230 .....
....	No; 68 in municipality.	.....	Three, 1 room in each.	.....

TOWNSHIPS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Cartwright	Forms supplied and used.	None, except one cheese factory.	Wells used; clay soil and sub-soil.
Claradon and Mills		Two	
Charlottenburg	Yes	None	Generally clay soil.
Culross		Two or three butter and cheese factories, employing one or two hands in each.	Wells
Charlotteville			
Clarence		Thirteen; seventeen	Wells
Caistor	Yes; yes	One cheese factory, three employees.	Wells: clay loam
Crosby, North	Yes	Four cheese factories, 2 hands in each: 1 grist mill, 3 hands; 1 saw mill, 8 hands: 1 furniture factory, 5 hands.	Wells: sandy loam, sub-soil clay and gravel.
Chaffey	No; no	None	
Collingwood		One woollen factory; one cheese factory employing 15 hands.	Wells: chiefly gravel
Chapman	No forms	One sash and door factory, 2 hands; 2 saw mills, 10 hands each; 2 shingle mills, 10 hands each.	Wells and springs; soil clay.
Christie	No forms	Three saw mills, employing 25, 8, 5 hands respectively; 1 sash factory, 2 hands.	Wells are used; loam and clay sub-soil.
Cardwell	No	None	Wells

TOWNSHIPS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal?	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.
No veterinary inspection.	No slaughterhouses.	By householder.....	By dry earth closets; no contract removal.	None.
No inspection	None	....	.....	None.
9,164 cattle; probably about 6,000 dairy cows; no inspection; no examination of herds.	Not more than 2 in municipality.	By householder ...	No system of sewage.	None.
Cannot give the number of cows.	Two or three slaughterhouses.	.....	... .	.....
....	....	.....	... .	....
....	Not licensed; are in bad condition.	....	.....	.....
About 1,700; no....	Four; no licenses; offal fed to hogs.	By householder	By dry earth closets.	None.
.....	One; drained to lake; offal burned.	By householder	No	.....
None	Two; offal fed to hogs.	.....	.....	.....
Nineteen dairy cows; no.	Four slaughterhouses, all licensed; offal disposed of on farm lands.	.....	.....	....
About 400; no; none.	None	By householder	Dry earth closets and cess pools.	None.
No dairies.....	One slaughterhouse.	By householder	....	.....
....	None	....	.....	None.

TOWNSHIPS.—*Continued.*

Municipality.	Names of M. H. O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Caledon	James Algie, M.D.	Regarding nuisances, the M. H. O. finds less trouble from year to year; one slaughterhouse nuisance satisfactorily abated; hog pens, 4 removed; dead animals, 6 buried.	Diphtheria, 8 cases, 2 deaths; typhoid, 6 cases, 1 death; scarlet fever, 6 cases, no deaths.
Crowland	S. H. Glasgow, M.D.; Michael Doan, sanitary inspector.	Inspector attends to all complaints.	Scarlatina, 1 case; diphtheria, 1 case; typhoid, two cases, 2 deaths.
Caldwell	None		None reported
Clarke	None appointed	Township is divided into five districts, 1 member of the Board having the oversight of each.	Scarlatina, 3 cases; diphtheria, 2 cases, 1 death; typhoid, 2 cases, 1 death.
Cumberland	James Ferguson, M.D.; Peter A. McLaren, sanitary inspector.	No general inspection, only when complaint is made.	Scarlatina, 10 cases; diphtheria, 12 cases, 2 deaths; typhoid, 6 cases.
Cardiff	W. Giles, M.D	Inspection when necessary	Diphtheria, 9 cases, 4 deaths.
Dawson	None	None	None
Downie	J. J. Paul, M.D	All schools, cheese factories, slaughterhouses, wells and closets were inspected.	About 12 cases diphtheria and 24 cases typhoid, 2 deaths from the latter.
Dungannon	— Lavett, M.D.	None	None
Dunn	N. Hopkins, M.D		None reported
Dalhousie and Sherbrooke	A. Bradford, M.D.	None	Scarlatina, 4 cases

TOWNSHIPS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation demanded.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
.....	.....	.....	.....	.....
.....	Generally so.....	.....	Eight schools; 8 rooms.	Don't know .....
No hospital	None	.....	One; one.	228 cubic ft.....
All cases isolated as well as circumstances would permit by the physician in attendance.	No; number of children from 5 to 16, 719; from 16 to 21, 244—963.	Physician attends and orders removal of all clothing, bedding, etc., and the boiling disinfection of same. House fumigated with sulphur, repapered and whitewashed.	Nineteen; only one has 2 rooms.	No means of knowing
No hospital; isolation in private houses only.	No; about 900; vaccination neglected.	.....	Sixteen; only 4 have 2 rooms.	Much less than sanitary science would demand.
Houses placarded...	No	Sulphur burned, carbolic acid solution used.	One; 1.	.....
None	None	Don't know	One school; 1 room; about 15.	.....
Board causes families to be isolated where diphtheria appears.	....	M. H. O. disinfected all premises where contagious diseases existed.	.....	.....
None	No; 238; age from 5 to 16, —.	None	Seven; average attendance, 35.	.....
No hospital	Don't know of any..	Free use of carbolic acid.	Five; 5; attendance, 30, 33, 35, 38, 40.	About 400 feet .
None; no isolation hospital.	No; 360; don't know	....	Twelve; 1 room in each school; average, about 25.	Don't know .....

TOWNSHIPS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Caledon			
Crowland	All cases promptly reported.	None	Wells and cisterns
Caldwell		None	Wells
Clarke	To physicians and used by them; none to teachers.	Two cheese factories	Wells; varies greatly
Cumberland	No; no	No factories	Gravel and clay
Cardiff	No	One cheese factory	Wells or creeks
Dawson	Don't know	One saw mill	Wells; gravel and clay
Downie			
Dungannon	None	Three cheese factories	Yellow loam, sandy bottom.
Dunn	Supplied to M. H. O.	One cheese factory	Clay soil, sub-soil clay loam.
Dalhousie and Sherbrooke	No forms supplied	Four cheese factories, 2 men in each.	Wells and springs; sandy loam.

TOWNSHIPS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal?	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.)
.....	.....	.....	.....	.....
No cases of tuberculosis.	None	Householders	.....	.....
.....	.....	.....	.....	.....
No dairies.....	Three; no license; fed to hogs.	.....	.....	None, except slaughterhouses.
About 600 cows. ...	No regular ones; no license; no drains; no inspection.	Householder.....	Some dry earth closets.	None.
No inspection	.....	.....	.....	.....
A few cows kept by farmers; no dairy.	.....	.....	.....	.....
.....	.....	.....	.....	.....
525 cows; no; none.	The house is built on a high plane and all refuse is washed away.	None	.....	None.
1,000; no inspection; no herd examined.	None	By householder	Pit system	None.
Don't know; no; none.	None	Householder.....	Dry earth closets; no contract.	None.

TOWNSHIPS.—*Continued.*

Municipality.	Names of M. H. O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Dover	J. S. Agar, M.D.	No general inspection carried out.	Diphtheria, 15 cases, 1 death; typhoid, 50 cases, only 2 deaths reported.
Denbigh, Abinger and Ashby	C. D. Doig, M.D.	No official inspection this year.	None
Dorchester, S.	Milton Baker, M.D.; Peter Carlton, sanitary inspector.		Diphtheria, 7 cases, 3 deaths; typhoid, 1.
Douro	J. H. Fraser, M.D.	No systematic inspection of premises.	Three cases typhoid, the result of bad water; 1 case diphtheria, 1 death; 6 cases scarlet fever, 2 deaths.
Darlington	— Mitchell, M.D.	Reports of medical men and complaints of people.	Scarlatina, 9 cases; diphtheria, 12 cases, 3 deaths; typhoid, 10 cases, 1 death.
Dereham	H. Minishall, M.D.; J.K.Creighton, M.D.	By sanitary inspector, who attends promptly to all complaints.	Scarlatina, 20 cases; diphtheria, 5 cases; typhoid, 12 cases, one death.
Dumfries, N.	D. A. Thomson, M.D.; John Macnab, sanitary inspector.	Slaughterhouses and milk vendors are inspected once a year.	Typhoid, 9 cases, 1 death
Draper	S. Bridgeland, M.D.		Diphtheria, 2 cases
Dorchester, N	A. Graham, M.D.		Typhoid, 1 case
Dawn	— Galbraith, M.D.		None
Darling		No inspection made	None
Deleware	F. H. Mitchell, M.D.	House to house inspection	Typhoid, 12 cases

TOWNSHIPS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
No isolation hospital; patient is kept in a separate room and others kept as far as possible from communication with him.	No; about 500 in municipality.	Patients given bath; clothing soaked in bichloride solution; house fumigated with sulphur.	Eleven; average attendance, upwards 40.	.....
No hospital; no diseases to isolate.	No	No disinfection required.	Seven; 7 rooms	....
....	Compulsory vaccination in all the schools; about 150 vaccinated last February.	According to rules laid down in Public H. Act.	Eleven; 15.	.....
....	... .	....	.....	....
Placarding in some cases.	No	Each medical man attends to this himself, using carbolic acid, etc.	Nineteen schools, all 1 room; attendance from 8 to 50; average, about 18.	From 20 to 40 cubic feet.
The best that can be done under the circumstances, each case requiring different methods.	No; during the year probably 99% have been vaccinated. Total number of school children in municipality, 894.	By the use of antiseptics, while washing and scrubbing, burning sulphur, and in some cases burning of bed linen, etc.	Eleven; 4 have 2 rooms each; about 550 in tp.	....
.....	Not compulsory; about 550 children.	....	Eleven, majority have 1 room.	Don't know .....
.....	....	.....	Eight	.....
Disinfected by M. H. O.	None	None	....	
None; not required.	.....	.....	Sixteen	.....
None	Don't know	None used	Six; 1 room in each.	Don't know .....
.....	No; 280 school children; all vaccinated in 1894.	Ordinary precaution observed.	Seven; 8 rooms.....	320 ....

TOWNSHIPS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Dover	Neither	None	Wells; heavy clay with quicksand sub-soil.
Denbigh, Abinger and Ashby	None used	Two cheese factories, one hand in each.	Springs and wells; sandy loam, gravely sub-soil.
Dorchester, S.		Three cheese factories	
Douro			
Darlington	None used	Two cheese factories, two hands in each.	Wells entirely; clay, sand and loam, sub-soil, gravel.
Dereham	Don't know	Nine cheese and butter factories, 3 hands in each.	Soil generally clay
Dumfries, N.		Two cheese factories, 2 employees in each.	Soil is principally clay, sandy loam, sub-soil, gravel.
Draper		None	
Dorchester, N.	M. H. O. use them	Six cheese factories, employing 22 men.	Wells and springs
Dawn	None; no; no	One cheese factory	Wells; clay with gravel subsoil.
Darling	Don't know	One cheese factory; 2 hands.	Soil is mostly light
Deleware	Yes; yes	Two factories; 45 hands	Wells; gravel

TOWNSHIPS —*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal?	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.)
No dairy	None	Householder.....	Pit system	None.
Don't know number of cows.	None	Householder.....	No prescribed system; no contract removal.	None.
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
Don't know	One small one; a portion fed to hogs and balance on ground as manure.	By householder	By householder	None.
Our sanitary inspector is a V. S.; no estimate can be made of the number of cows.	Four slaughterhouses all licensed; tile drained into a safe distance.	.....	.....	.....
About 510; no inspection.	Seven; licensed; offal is fed to hogs part boiled and part raw.	By householder	.....	.....
.....	.....	.....	.....	.....
About 4,500 in tp.; no inspection needed.	Four slaughterhouses.	Householder.....	Mostly dry earth closets.	.....
.....	None	By householder	.....	.....
Don't know	None	By householder	.....	.....
About 500 dairy cows.	Two; offal fed to hogs.	By householder	Natural drainage...	None.

TOWNSHIPS.—*Continued.*

Municipality.	Names of M. H. O. and sanitary inspector.	State extent and method of general inspection.	Contagious diseases.
Eldon	John F. Ross, M.D.		Two cases diphtheria, 2 deaths.
Essa	J. W. Norris, M.D.	Each village is inspected by at least two members of the Board.	Typhoid, 3 cases, 1 death.
Egermont	A. L. Brown, M.D	The township is divided into four parts and an inspector appointed for each division.	Scarlatina, about 20 cases; diphtheria, 4 cases, 2 deaths; typhoid, 7 cases.
Edwardsburg	S. C. McLean, M.D.; T. H. Barton, sanitary inspector.		None this year.
Easthope, South	Dr. Robert Whiteman.		Diphtheria, 2 cases, 1 death; typhoid, 1 case.
Esquesing	No M.H.O.; D. McGuire, sanitary inspector.	General inspection is made in the month of May.	None reported
Erin			A number of cases of typhoid fever have occurred during the year; a few cases of diphtheria, 2 deaths.
Elma	Thomas Douglas, M.D.	No general inspection; inspection only when complaint is made.	Smallpox, 1 case; diphtheria, 12 cases, 2 deaths; a few mild cases of typhoid.
Euphrasia	T. E. Bennett, M.D	Not to any great extent.	Typhoid, 3 cases, 1 death.
Zorra, East	A. N. Holston, M.D.; James D. McKay, sanitary inspector; Geo. Hotson, sanitary inspector.	Each inspector makes two visits to all factories, schools, slaughterhouses, etc., in his division, and attends to any complaints.	Scarlatina, 2 cases, 1 death; diphtheria, 4 cases, no deaths; typhoid, 4 cases, 1 death.
Emily	V. Cornwall, M.D.	None	Scarlatina, 3 cases, 1 death; diphtheria, 14 cases.

TOWNSHIPS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
No isolation	No compulsory vaccination; 357 school children in municipality.	.....	Ten schools	.....
None needed this year.	No; don't know; quite a number.	None used by Local Board.	Thirteen in tp.; 2 of these have 3 departments, 1 in Cookstown and 1 in Angus.	Don't know .....
No isolation hospital; patients removed to remote parts of the house; in all cases isolation is carried out far as possible.	No; children from 5 to 16, 905; from 16 to 21, 311. Can't say how many vaccinated.	Bed clothes, etc., washed in solution bi-chloride; fumigation with sulphur.	Fourteen schools; 1 has 2 divisions.	Don't know .....
No hospital	Not compulsory	None	Twenty-one; 22 rooms; average in each, 47.	From 88 to 478; average 200 feet.
House quarantined; no isolation hospital.	No	By carbolic acid and bi-chloride of lime.	Six schools; 1 room in each, with one exception.	200 .....
None	No	....	.....	.....
.....	.....	.....	.....	.....
All cases isolated at home; all persons are prevented going to the premises.	Not made compulsory, but a large number of children were vaccinated.	Followed instructions laid down by Provincial Board of Health.	Twelve schools; 1 room in each.	.....
No hospital	No	To no great extent..	Number of schools, 20; rooms, 22.	....
None; no	Not compulsory; 1,157; cannot say.	House thoroughly cleaned under direction of Inspector; carbolic acid in water and chloride of lime freely used; clothing and bedding washed and fumigated; all excreta buried or burned.	Fourteen; mostly 1 room; average attendance 42.	Enough to satisfy School Inspector.
Patients isolated in dwellings, which are placarded.	No; 602 on rolls; none vaccinated.	The directions on pamphlet No. 15 carried out.	Twelve schools; 1 room in each; average attendance 20 in each.	440 .....

TOWNSHIPS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Eldon			
Essa	None	None	Clay soil mostly, and water in most cases pure.
Egermont	Not supplied	One creamery and 2 cheese factories; 1 employee to each.	Abundant supply of water; loam, gravel and clay.
Edwardsburg	No	No factories	Wells; principally clay and rock.
Easthope, South	Supplied to all M.D.'s.	One pump factory, 3 hands; 1 woollen mill, 10 hands; 1 furniture factory, 12 hands; 1 furniture factory, 8 hands.	Wells and some natural springs.
Esquesing	No		Wells principally
Erin			Wells generally; samples of water were examined in the vicinity of Hillsburg and found unfit for use unless boiled.
Elma	None supplied		Soil, clay loam; limestone sub-soil.
Euphrasia	Supplied to M.H.O.	One cheese factory, 2 employees.	Wells; rock, clay and sand.
Zorra, East	Yes	One cheese factory, 7 hands	Wells solely; all kinds of soil; water good.
Emily	Supplied to physicians only.	None	Well water is used

TOWNSHIPS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal.	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.)
....	.....	.....	.....	.....
No large dairies; the farmers supply villages with milk.	None licensed, and the Board have a good deal of trouble in making owners keep them clean.	Have these things attended to.	Mostly privy pits; some beginning to use dry earth closets.	.....
Cannot tell number of dairy cows; no inspection.	None licensed	By householder	Dry earth closets; no contract removal.	.....
....	None licensed	.....	.....	....
About 1,500; no inspection.	Three; none licensed; think all offal is fed to hogs.	Burn garbage; night soil buried.	.....	.....
Don't know of any..	By householder.....	....	.....	....
.....	....	.....	....	.....
Don't know; no inspection.	Four; none licensed.	.....	.....	.....
No inspection	Two; no license	.....	.....	....
Cannot say; some few cases of tuberculosis.	Three in township; offal put on land.	In villages cleaned out twice a year.	.....	.....
No inspection	None	Householder..	.....	.....

TOWNSHIPS.—*Continued.*

Municipality.	Names of M. H. O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Erneston	J. A. Mabee, M.D.; G. Ferguson, sanitary inspector.	Inspection of suspected premises and of all places complained of.	Scarlatina, 1 case; diphtheria, 5 cases, 2 deaths; typhoid, probably, 15 cases, 3 deaths.
Ekfrid	L. Hyttenranch, M.D.	When complaints are made the premises are inspected.	Typhoid, 1 case
Elderslie	No M.H.O.	Members of Local Board of Health are appointed sanitary inspectors in divisions.	Scarlatina, 4 cases, 1 death; diphtheria, 2 cases.
Faraday	Green, M.D., M.H.O.; Thomas Stanger, sanitary inspector.		None
F roy	W. A. Kyle, M.D.; E. W. Evans, sanitary inspector.		Scarlatina, 16 cases, 1 death; diphtheria, 33 cases, 9 deaths.
Ferris	J. B. Carruthers, M.D.; A. Gendreau, sanitary inspector.	Each member of the board to report any contagious disease.	Typhoid, 1 case.
Fredricksburg, N.	None	Each member looks after his own vicinity.	Typhoid, 1 case.
Fullerton	W. E. Armstrong, M.D.		Scarlatina, 15 cases; typhoid, 9 cases.
Fenelon	J. W. Ray, M.D		None
Flamboro', E.	J. O. McGregor, M.D.		A number of cases scarlet fever; diphtheria, some cases.
Garafraxa, E.	D. Gear, sanitary inspector.		None
Grimsby, S.		Sanitary inspector visits each house twice each year.	None reported.
Gower, N	F. B. Harkness.	None	None
Grey	M. Ferguson, M.D	Inspection by members of the board in their districts.	None

TOWNSHIPS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895?	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
Isolation in room of house.	No	Some houses disinfected.	Seventeen; all 1 room.	Mr. F. Burrows, of Napanee, P.S.I., is preparing a sanitary report on schools. He says about 500 cubic ft.
The dwelling of such patients are placarded; no hospital.	Not compulsory	M.H.O. attends to it in a very satisfactory manner.	Eleven schools; 12 rooms.	.....
.....	No; nearly all the children have been vaccinated.	.....	Eleven schools; 11 rooms.	Cannot say.....
No regular system ..	Some vaccination done in 1894 not very successful.	Burnt sulphur and carbolic acid.	Six schools in township; 1 room in each; average attendance, 24.	....
No isolation hospital.	Unknown; certainly not compulsory.	Unknown	Seven schools.....	....
No isolation hospital.	Not this year.	Burn sulphur and saltpetre; use carbolic acid, whitewashing the house.	Four; one room in each.	Don't know .....
None	None	.....	Nine; 9.....	Don't know .....
Placard dwelling; no hospital.	No	Sulphur fumigation; carbolic acid vapor; clothing boiled.	.....	....
None	No; no public vaccination.	None	Ten schools; 2 rooms in 3.	....
. .. .	.....	Disinfectants used..	.....	.....
....	.....	....	Eight	....
Houses placarded...	.....	....	.....	....
In cases of necessity the M. H. O. attends to it.	Not compulsory	.....	Seven; 1 room in each; 1 with 2 rooms.	.....
.. ..	Not compulsory; 850 in municipality.	Houses are disinfected under instructions of family physician.	Twelve; No. 1—1 room, atten. 30; 2—1, 25; 3—1, 40; 4—1, 40; 5—1, 35; 6—1, 30; 7—1, 40; 8—1, 30; 9—1, 25; 10—1, 30; 11—1, 37; Union No. 3, 1 room, atten. 35.	Cannot say.....

TOWNSHIPS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Erneston	Both supplied	Two woollen factories, 6 to 8 hands.	Wells; clay and sand; usually clay sub-soil.
Ekfrid	Supplied and both make use of them.	Two cheese factories employing 3 hands each.	A great many wells: character of soil varies.
Elderslie	Yes	Two cheese factories, 1 creamery, employing 3 hands in each.	Soil, gravel, clay and sand: sub-soil, blue clay.
Faraday	No; no	One saw mill	Wells are chiefly used; sandy soil with quick sand.
Fitzroy		One woollen factory	
Ferris	No forms	None	Wells and springs
Fredricksburg, N.	No	Three cheese factories; 9 hands.	
Fullerton	No; no	Three cheese factories, employing 4 men; 1 saw mill and factory, 6 men.	Wells; clay, with gravel and sand.
Fenelon	No	None	
Flamboro', E.			
Garafraxa, E		None	
Grimsby, S.			
Gower, N	None supplied		The soil chiefly clay, sandy loam and gravel.
Grey	No forms supplied	Four cheese factories, 1 employee in each.	Loam and gravel

TOWNSHIPS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal?	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.)
No	About 10 in summer; all isolated.	Householder.....	....	.....
Don't know	None licensed	Householder.....	.....	.....
6,295 cattle in tp.; no cases of tuberculosis reported this year.	None	.....	....	.....
About 300 cows; no inspection; no examination.	No regular slaughterhouses.	By householder.....	No regular system ..	None.
Not known	None licensed	.....	.....	None.
No dairy cows.....	None	Householder..... ..	.....	None.
Don't know	None	....	.....	.....
.....	None	.....	....	.....
....	Two in township....	....	....	.....
....	....	.....	... .	.....
.....	None	.....	....	None.
....	.....	.....	.....	.....
No inspection	One slaughterhouse; offal goes into Rideau river.	By householders....	By householders....	None.
.....	One slaughterhouse; well drained.	By householder	Dry earth closets ...	None.

TOWNSHIPS.—*Continued.*

Municipality.	Names of M.H.O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Gwillumbury, W.	None		No cases reported this year.
Gwillumbury, N.	None		Diphtheria 3 cases
Glanford			Sanitary condition of the township was such as not to require the interference of the health officers; typhoid 1 case.
Gwillumbury, E.	No M. H. O. Chas. H. Haines, Samuel Vandwater, sanitary inspectors.	Inspector issued notices to inhabitants to clean up premises, etc.	Diphtheria, 8 cases; typhoid, 12 cases.
Goderich			No reports of any contagious disease were received, and no complaints made during the year.
Greenock	No M. H. O. Lewis Lamb, W. G. Ritchie, sanitary inspectors.	All slaughterhouses, cheese factories, school houses, inspected.	Scarlatina, 4 cases; diphtheria, 3 cases; typhoid, 7 cases.
Grimsby, N	J. W. Oliver, M.D.	No inspection	Diphtheria, 8 cases, 1 death; typhoid, 2 cases.
Georgina	T. C. Nobbs, M.D.	No inspection	Diphtheria, 5 cases; typhoid, 4 cases.
Grattan	J. T. Dowling, M.D.	None	Scarlatina, 6 cases; diphtheria, 9 cases, 1 death; typhoid, none.
Gainsboro'.	J. W. Calver, M.D. The other four members of the board are sanitary inspectors.	When complaints are received, inspection is made.	Scarlatina, 2 cases; typhoid, 8 cases.
Grimsby, S	N. P. Henning, M.D. D. Huntsman, sanitary inspector.	Two general inspections of villages, part of the municipality annually.	Diphtheria, 1; typhoid, 5.

TOWNSHIPS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
.....	No vaccination	As directed by physician when found necessary.	Fourteen; all single rooms with one exception.	Schools all large ....
In dwelling of patients.	None	By order of physician in attendance.	Seven schools	.....
....	.....	.....	....	.....
No hospital; houses placarded and isolation enforced by Board and M.D.	No; don't know; about 750 school children.	.....	Fifteen schools.....	Sufficient ....
.....	.....	.....	.....	.....
Placard houses and prohibit inmates from mingling with the public.	Not compulsory; don't know.	Carbolic acid and fumigation with sulphur, etc.	Nine; two with 2 rooms; average attendance 55.	About 200.....
None	No	Carbolic acid and sulphur; paper removed and walls whitewashed.	Six schools; 7 rooms.	Ample space .....
Patients isolated in all cases.	No; 418; don't know.	Premises disinfected under directions of attending physician.	Six; 8; cannot give attendance.	.....
Houses isolated; no hospital.	No; about 350 school children; none vaccinated in 1895.	House fumigated with sulphur; clothing with chloride solution; privies, cellars and outbuildings with copperas water.	Seven; 7	....
None	No	Clothing thoroughly aired; house fumigated.	Eleven; 11	.....
Placard; no hospital.	Not compulsory; don't know.	Fumigation as per pamphlet issued by Provincial Board of health.	Seven; one school has 3 rooms; six, 1 room each.	....

TOWNSHIPS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Gwillumbury, W.	Don't know	None	Generally abundant; soil variable.
Gwillumbury, N.		None	Splendid well water; mostly heavy clay sub-soil.
Glanford			
Gwillumbury, E.	To physicians only	Two cheese factories, 3 hands in each; 1 woolen factory, 8 hands; 1 sash and door factory, 6 hands.	Wells; clay; gravel
Goderich			
Grennock	Forms supplied	Two cheese factories, 4 hands.	Wells and springs; sub-soil varies from gravel to blue clay.
Grimsby, N	Yes	None	Clay soil and sub-soil
Georgina	No forms supplied		Wells; all kinds.
Grattan	No forms supplied; physicians usually notify Board.		Lakes, springs, running streams and wells; soil principally loam.
Gainsboro'.	None; no; no	None	Wells and cisterns; soil, clay; loam, sub-soil clay.
Grimsby, S	Yes; yes	One cheese factory, employees 3 hands.	Wells; soil clay, sub-soil rock.

TOWNSHIPS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds of tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal.	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.)
Don't know	None	.....	.....	None.
No	None	Householder.....	.....	.....
.....	.....	.....	.....	.....
About 1,000; no inspection.	Eight slaughterhouses; no license; offal generally buried.	Householder..	.....	.....
.....	.....	.....	.....	.....
Approximately 2,000 cows; no regular system of inspection.	Five slaughterhouses; drained.	By householder	Dry earth closets; no contract removal.	Five slaughterhouses; licensed and inspected.
No medical or veterinary inspection.	None	By householder	Dry earth closets. ..	None.
Cannot say; some dairy cows have been inspected by veterinary.	None	.....	.....	None.
.....	One; not licensed ..	By householder	Dry earth closets	None.
Don't know; no inspection.	None	By householder	None	None.
Don't know; No; none	None	By householder	.....	None.

TOWNSHIPS.—*Continued.*

Municipality.	Names of M. H. O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Gosfield, N	G. McKenzie, M.D.; James Bennett, sanitary inspector.	No system of general inspection; when cases are reported, inspection follows.	Diphtheria, 6 cases.....
Glanmorgan.....	None appointed	.....	Diphtheria, 18, 4 deaths ....
Gloucester.....	— Kennedy, M.D	....	Diphtheria, 51 cases, 16 deaths; scarlet fever, 23 cases, 2 deaths.
Glenelg	James Gunn, M.D. ..	Township divided into five districts for inspection purposes.	Scarlatina, 40 cases, 5 deaths; Diphtheria, 4 cases, 1 death; typhoid fever, 5 cases, 1 death.
Gordon	.....	None	None .....
Garafraxa, W	James Dow, M.D.; W. C. Cowan, sanitary inspector.	All school houses, slaughter-houses, yards and closets in Bellwood, inspected.	Scarlatina, number not known; diphtheria, number not known; typhoid, 8 cases.
Hullett	Thomas Agnew, M.D.	.....	Eleven cases typhoid.....
Hamilton	None appointed this year.	No general inspection this year.	None reported.....
Hibbert.....	None appointed	The board, in committee, inspected school premises, etc.	Diphtheria, 3 cases, 2 deaths.
Hungerford	None	.....	.....
Hawkesbury, E	No M.H.O.; U. Pilou, sanitary inspector.	No general inspection made.	Diphtheria, 11 cases, 8 deaths
Hagarty, Sherwood, Jones, Richards and Burns.	.....	Sanitary inspector and physicians report all contagious diseases.	Scarlatina, 2 cases .....

TOWNSHIPS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
Houses placarded; children prohibited from attending school.	Not this year; about 558 children in municipality; none.	Houses ordered to be whitewashed; new wall paper put on; all clothing washed and fumigated.	Seven; 1 room in each; No. $\frac{3}{8}$, $\frac{7}{4}$, $\frac{5}{1}$, $\frac{11}{1}$, $\frac{12}{1}$, $\frac{18}{1}$, $\frac{18}{1}$.	From 235 to 537 cubic feet to each.
Placarding infected houses and closing them.	Don't know of any person being vaccinated during the year.	Under the supervision of the medical attendant.	Six; 1 room in each; cannot give attendance.	Don't know .....
.....	....	.....	.....	... .
Placarding infected houses and isolation in families under direction of family physician.	No; 895 children; none vaccinated.	Cleaning clothing and fumigating infected houses.	.....	....
None	Not compulsory; about 125 children in municipality.	.....	Four schools; No. $\frac{1}{40}$, $\frac{1}{45}$, $\frac{1}{45}$, $\frac{1}{45}$.	Don't know .....
Patients kept in separate room.	Not compulsory this year; all school children were vaccinated in 1894.	Walls ceilings and floors washed with carbolic acid solution (one in 40); sulphur burned in rooms; bedding, clothing washed, boiled and fumigated.	Eight schools	Don't know .....
No	No	.....	Eleven schools.....	.....
No isolation hospital	Not this year	No contagious diseases this year.	Eighteen public schools.	Don't know .....
.....	Not compulsory	Not required	Ten schools, with 1 room each.	... .
None	No; none reported..	None	Eighteen; 1 room in each; average about 25.	250.....
Under instructions of attending physician.	No; 1,658 school children; don't know how many vaccinated.	Carbolic acid used in most cases.	Twenty-five schools; 28 rooms; average attendance about 30 in each.	155 .....
Patients are kept confined to the house.	Number school children in municipality, 675.	All places are thoroughly disinfected by physicians.	Seven schools; 1 room in each.	600 cubic feet .....

TOWNSHIPS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Gosfield, N.	No forms supplied	One cheese factory, 2 persons employed in each.	Wells; mostly clay soil
Glanmorgan	Don't know	None	Wells; sandy soil
Gloucester			
Glenelg	Physicians supplied	None	
Gordon	None supplied	None	Wells used; clay loam sub-soil; quick sand.
Garafraxa, W	M.H.O. supplied and makes use of them.	None	Wells and springs; clay and sand.
Hullett	No	Two; butter and cheese	Clay, gravel and sand
Hamilton	No forms supplied	Three cheese factories; 3 hands in each.	All kinds of soil
Hibbert	No forms used	One cheese factory; 3 hands.	Ordinary wells and springs.
Hungerford		Thirteen cheese factories; 3 hands in each.	By wells; water generally good; clay and clay loam and gravel sub-soil.
Hawkesbury, E	Physicians are supplied	Eighteen cheese factories, 2 men in each; 6 carriage shops, 3 in each.	Wells; clay soil, sand and gravel sub-soil.
Hagarty, Sherwood, Jones, Richards and Burns.	Yes; yes	No factories	Wells and spring

TOWNSHIPS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal?	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.)
Don't know; no cases of tuberculosis.	Two; drained by ditches; offal fed to hogs.	.....	.....	None except slaughter houses; no license.
Not known; no inspection.	None	By householder	Some dry earth closets.	None.
.....	The Board experienced some difficulty with pigs and slaughterhouses.	.....	.....	.....
.....	.....	.....	.....	.....
About 250 cows; no inspection.	None	Householder.....	Dry earth closets; no contract removal.	None.
No dairy cows; no inspection made.	One; not licensed; offal is burned and drained into Grand River.	Garbage and night soil burned and buried by householder.	Dry earth closets; contract removal in some cases.	None.
No	One	.....	....	Not any.
Don't know; no inspection.	Three; licensed; offal buried.	By householder	Dry earth closets ...	None.
No disease amongst the cattle this year.	No slaughterhouses.	Garbage and night soil disposed of by means of closets, by householder.	Closets	None.
About 5,400 cows; no; none.	2 slaughterhouses; not licensed; offal buried or burned.	Disposed by householder.	Dry earth closets ..	None.
About 5,000; no medical or veterinary inspection.	5 slaughterhouses; none licensed; some bury offal, others boil it and feed to pigs.	Each farmer has his own way of disposing of it.	....	None.
About 1,200 milch cows in municipality; no inspection.	None	Put on land that is cultivated by householder.	Dry earth closets ...	None.

TOWNSHIPS.—*Continued.*

Municipality.	Names of M. H. O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Hay	— Buchannan, M.D.	School houses and public places inspected once a year.	No cases reported
Harvey	C. E. Bonnell, M.D		Two families had diphtheria.
Howard	A. J. Stevenson, M.D.; F. Arnold, sanitary inspector.		Scarlatina, 2 cases; typhoid, 6 cases.
Hillier	J. B. Ruttan, M.D	No inspection	Diphtheria, 2 cases, mild type.
Howick	A. M. Spence, M.D.	The board inspects as a body.	Scarlatina, 3 cases; diphtheria 3 cases.
Harwich	J. McCully, M.D.	On complaint, the sanitary inspector sent, and reports in writing.	Scarlatina, 2; diphtheria, 1; typhoid 1.
Hope	A. C. Beatty, M.D.; John McIlroy, sanitary inspector.	Personal inspection by sanitary inspector.	Scarlatina, 2 cases, 1 death; typhoid, 1 case, 1 death.
Houghton	— Johnston, M.D		Typhoid in one family, 1 death.
Huntington	E. Harrison, M.D.; H. Wood.	Inspection done by sanitary inspector.	
Humberstone	F. M. Haney, M.D.; E. Augustine, sanitary inspector.	Inspector visits places to which his attention has been called.	Diphtheria, 2 cases; typhoid, 1 case.
Howe Island	—— Ryan, M.D.		Township free from all contagious diseases in 1895.
Hinchinbrook	A. Lockhart, M.D.	None	None
Joceyln			None
Joly	——Carmichael, M.D.	Each member of the Board inspects that portion of his township in which he resides.	None
Kaladar	None appointed		None
Kinloss	J. S. Tennant, M.D.; no sanitary inspector.	Inspection is made by each member of the Board.	Diphtheria, 7 cases, 1 death; typhoid, 3 cases.

TOWNSHIPS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
.....	.....	.....	Fifteen schools; 19 rooms.	.....
.....	.....	.....	.....	.....
.....	None	Physicians in charge disinfect houses.	Sixteen schools	.....
Placarding houses ..	No	M. H. O. attends to this matter.	.....	.....
M.H.O. placards the premises.	No; no; about 1,400	M. H. O. disinfects.	Eighteen schools; 20 rooms; 74.	....
Dwellings placarded.	Not compulsory	Carbolic acid used freely; soiled clothing burned. Walls whitewashed; sulphur burned.	Twenty-one schools..	Don't know .....
Placarding and isolation of inmates.	Not compulsory; 1,375 children in municipality.	Under direction of M. H. O.	Eighteen 1 in each school.	.....
....	430 persons vaccinated.	....	.....	.....
.....	No	Disinfection with sulphur fumes, etc.	Twelve	.....
No hospital, patients are isolated in their rooms.	No vaccination this year.	Hot turpentine spray by inhaler and burning of sulphur, etc.	Nine schools; $\frac{1}{10}$, $\frac{1}{17}$, $\frac{1}{5}$, $\frac{1}{11}$, $\frac{1}{8}$, $\frac{1}{6}$, $\frac{1}{15}$, $\frac{1}{7}$, $\frac{1}{12}$.	About 300 cubic feet.
.....	About 60; none in 1895; all vaccinated in 1894.	.....	Four; 4 rooms.....	....
....	Don't know	None	.....	Don't know .....
....	No	.....	Four	....
None	No; 60; none	....	Two; 2	Don't know .....
None	None	No contagious diseases of any kind.	Nine; one room in each, with one exception.	Don't know .....
By placarding the premises.	Cannot say how many	Looked after by M. H. O.	Ten schools; attendance, 56 in each.	.....

TOWNSHIPS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Hay			
Harvey			
Howard			
Hillier	M. H. O. uses them	One evaporator, 10 hands	Clay, limestone, gravel and rock.
Howick		Three cheese factories, 3 employees in each.	Springs; clay loam and gravel
Harwich	None	Four saw-mills	Wells; gravel soil
Hope	No forms	Two cheese factories, 2 hands in each.	Soil varies from heavy clay to gravel.
Houghton			
Huntington	None supplied	Five cheese factories, 3 employees in each.	Chiefly limestone formation.
Humberstone	None supplied	Eleven cheese factories, 2 hands in each; silver plating factory, 60 hands; 2 cabinet shops, 4 hands in each; 1 foundry, 5 hands; 2 carriage shops, 9 hands; 2 harness shops, 3 hands; 1 glass factory, 15 hands.	Wells chiefly sandy loam; sub-soil clay and rock.
Howe Island	No forms used		River St. Lawrence
Hinchinbrook	Don't use any	None but cheese factories	Gravel and sandy loam
Joceyln		None	Springs
Joly	Not supplied	None	Sandy loam; sub-soil hard pan.
Kaladar	Not aware of any	Three cheese factories	All wells and springs; sandy soil, principally gravel sub-soil.
Kinloss	Don't know	Two cheese factories and one creamery; 2 hands in.	Wells and running springs

TOWNSHIPS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal?	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
None	Three; satisfactorily attended to.	.....	.....	.....
Don't know; no.	None	Householder.....	.....	One fish phosphate allowed by council.
.....	Two	Householder.....	.....	.....
No inspection	4 slaughterhouses; offal fed to hogs.	Householder.....	No dry earth closets.	None licensed.
Cannot furnish the number; no inspection.	About 16 in P'rt Hope & Hope Township; none licensed.	.....	Dry earth closets principally.	None.
.....	.....	.....	.....	.....
.....	3 slaughterhouses; not licensed.	Householder.....	.....	.....
.....	Four open drains; offal disinfected; drains also disinfected.	Householder.....	Dry earth closets; no.	None.
About 400.....	None	Householders	Dry earth	None .....
Don't know	None	.....	.....	.....
.....	None	.....	.....	.....
297 cattle in township; no inspection.	None	Householder.....	Not contract.....	None .....
About 800 cows; no; none.	One; none	In the ordinary way.	.....	None.
Ten cows, exclusive of farmers' stock; no examination.	One; no science; cannot say.	By householder	Put on land	None.

TOWNSHIPS.—*Continued.*

Municipality.	Names of M. H. O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Keppel	....	.....	Three deaths from contagious diseases; 38 deaths occurred in township for the year from all causes in a population of 3,874.
Kennebec	John R. Helm, M.D..	.....	None .....
Kincardine	Thomas Bradley, M.D.; R. Mackenzie, sanitary inspector.	.....	Typhoid, 11 cases, 3 deaths..
Kingston	None	....	.....
Laxton, Digby and Langford.	B. Coleconk, M.D .. .	.....	Diphtheria, 2 cases, 1 death.
Lindsay and St. Edmunds.	J. H. Harnwell, M.D.; R. Irwin, sanitary inspector.	No general inspection	None .....
Lochiel	A. L. McDonald, M.D.; J. J. McMillan, sanitary inspector.	.....	Scarlatina, 18 cases, 7 deaths; diphtheria, 5, 1 death.
Lavant	——Kelborn, M.D	No inspection	None ....
Lanark	None appointed	No inspection; each member of the Board attends to matters in his own district.	None .....
Logan	A. D. Smith, M.D....	....	Smallpox, 3 cases; diphtheria, 2 cases, 1 death; typhoid, a few mild cases.
London	G. McNeil, M.D.....	....	Typhoid was prevalent in September and October; only two deaths from this cause were reported; 3 cases of scarlatina were reported.
Laird	....	None needed	None .....
Luther, West	A. E. Clendennan, M.D.; Jonathan Tovell, sanitary inspector.	.....	Diptheria, 10 cases, 1 death; typhoid, 3 cases, 1 death.
Lobo	P. S. Graham, M.D ..	... .	Scarlatina, 20 cases, 1 death; typhoid, 20 cases, 1 death.

TOWNSHIPS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
Placarding houses...	No compulsory vaccination this year; last year about 900 persons were vaccinated.	... .	.....	.....
.....	No	.....	Eleven; average 25 attendance.	....
.....	No; none vaccinated	....	Eighteen schools....	.....
.....	None vaccinated....	.....	....	.....
Isolated in their dwelling.	No	.....	Six; one room in each.	.....
This township is new and thinly inhabited; no need for isolation hospital.	None	....	Five	Don't know .....
Seven houses isolated in township.	No	Burned sulphur; washing walls with carbolic solution, etc.	Eighteen; eighteen.	165 cubic feet .....
.....	No; 187 school children.	.....	Five schools; one room in each.	....
No contagious diseases and no isolation.	Not compulsory	None	Ten schools; one has two rooms, all the others only one.	Cannot say .....
The cases of smallpox were isolated in farmhouses; a special physician and two trained nurses employed.	Yes; under instructions of the Secretary of the Provincial Board of Health.	.....	.....	.....
.....	.....	....	... .	... .
No	No; 69; don't know.	None	Two; 1 room in each.	Cannot say .....
No isolation hospital.	No	Under the direction of physicians.	Eight	.....
.. ..	Yes	All discharges from the body were disinfected; rooms cleaned and fumigated.	Ten; average attendance from 40 to 50.	....

TOWNSHIPS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Keppel			
Kennebec		One cheese factory; 2 hands.	Wells; gravel sub-soil
Kincardine	No forms	Five cheese factories; 2 employees in each.	Clay soil
Kingston			
Laxton, Digby and and Langford.	No	None	Wells
Lindsay and St. Edmonds.	Don't know of any	None	Mostly springs flowing from lime rock.
Lochiel	Yes; yes	Fourteen cheese factories; 2 in each.	Wells and springs; clay and limestone.
Lavant	None supplied	None	Mostly spring water
Lanark	None used	None	Mostly wells and springs
Logan			
London			
Laird		None	Gravel and clay loam
Luther, West	No	One cheese factory; 3 hands.	
Lobo			

TOWNSHIPS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details if any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal?	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.)
.....	.....	.....	.....	.....
About 300.....	None	.....	.....	.....
Cannot say how many	Three; offal is burnt.	By householder	.....	None.
No inspection	.....	.....	.....	.....
.....	None.....	Householder	Dry earth	None.
Cannot give number of cows; no inspection.	None.....	No towns or villages in this municipality.	.....	.....
No medical or veterinary inspection.	None in township...	.....	.....	.....
.....	None.....	Householder.....	.....	.....
Don't know; no; no.	None.....	None	No sewage.....	None.
.....	.....	.....	.....	.....
.....	.....	.....	The subject of night-soil affecting the health of the people has been.	.....
97; no; none....	None.....	.....	.....	.....
No inspection	.....	.....	.....	.....
.....	.....	.....	.....	.....

TOWNSHIPS.—*Continued.*

Municipality.	Names of M.H.O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Luther, East	A. C. Gavellier, M.D.; P. McLellan, sanitary inspector.	General inspection in May	Typhoid, 30 cases, 3 deaths.
Malahide	C. Sinclair, M.D.; A. Miller, sanitary inspector.	No general inspection; acts under instructions in special cases.	Smallpox, 10 cases; 3 deaths in 1894.
Madoc	E. D. Harrison, M.D.	No general inspection	None
Mattawan	None		None
Medora and Wood	No M.H.O.; J. P. May, sanitary inspector.	Really no inspection	None
Monteagle and Herchel.	Robertson, M.D.; no sanitary inspector.	None	None
Marmora Lake	H. M. Jones, M.D.	Inspection only when complaints are made.	Scarlatina, 2; diphtheria, 1.
Mayo	None		Diphtheria, 6 cases, 2 deaths.
Moulton	N. Hopkins, M.D.; a resident inspector in each ward.		Scarlatina, 4 cases; diphtheria, 1 case, 1 death.
Mulmur	A. G. Island, M.D.		Scarlatina, 2 cases; diphtheria, 2 cases, 2 deaths; typhoid, 12 cases, 1 death.
Mara	Wm. Gilpin, M.D.		Scarlatina, 47 cases, 10 deaths; diphtheria, 20 cases, 3 deaths.
Morrison	Shaw, M.D		Diphtheria, 2 or 3 cases, no deaths.
Medonte	Drs. Hawley & Heaslip; Messrs. Martin and Mofit, sanitary inspectors.	M.Ds. and inspectors look after their own districts.	Diphtheria, 1 case

TOWNSHIPS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895?	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
Isolation of contagions carefully carried out.	No	Clothing boiled, sulphur fumigation, etc.	Eight	
Isolated and quarantined in smallpox cases.	Yes	Infected houses disinfected under direction of M.H.O.		
Confined to private residence; no isolation hospital.	No; cannot tell now.	Carbolic acid and bichloride of mercury.	Sixteen generally; 1 room.	
None	No; 100; don't know.	Ordinary means adopted by attending physician.	One; 1 room; average, 25.	About 200
	A few; number not known.		Twelve schools; 1 room in each; from 15 to 40 in each.	
	No		Nine schools; 1 room each.	Cannot say
Houses kept isolated; no one allowed in or out; walls sprayed every other day, etc.	No; none in 1895	Nurse and patient disinfected every day; walls sprayed with a solution, floors with carbolic acid wash; doors covered with cheese cloth and sprinkled with solution of mercury; sulphur burnt in rooms.	One school; 3 rooms; 30, 49, 43.	180 cubic feet
Schools closed and private residence isolated far as possible.	No	At home by order of attending physician.	Three; 1 for each	
No	415; none		Eight schools; 8 rooms.	
No hospital; no	No.			
Each family was quarantined.	None vaccinated; 500 school children in township.	Disinfecting was done under direction of M.H.O.	Eleven; 1 room in each; average attendance, 50.	
Houses placarded		Houses fumigated	Five; 1 room in each.	
No hospital; houses placarded and disinfected.	No; 1,059 school children in township.	No diseases of an infectious nature.	Eight schools	

TOWNSHIPS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Luther, East	None	None	Wells
Malahide			
Madoc	Neither are supplied	Seven cheese factories	Wells and streams
Mattawan	Not supplied	None	Sandy soil
Medora and Wood	No	No factories, but summer hotels and school houses.	Lake water in a few cases; wells and springs.
Monteagle and Herschel.	No	Four cheese factories	Good
Marmora Lake	None supplied	Woollen factory; 6 hands	Wells; heavy loam; sub-soil clay and loam.
Mayo	None supplied	None	Mostly running streams
Moulton	No	None	Wells; all kinds of soil
Mulmur			
Mara	No	None	All kinds of soil
Morrison		None	Wells used
Medonte	Don't know	None	Springs and wells; soil generally clay, with gravel sub-soil.

TOWNSHIPS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal.	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.)
None	Two; none licensed.	Householder	Mostly privy pits.	
None				
Don't know	None	Householder	Dry earth closets	None.
None	None	By householder	No contract; no dry earth closets.	None.
	Two; no license; offal buried.	Buried		
Cannot say	None		No sewage	None.
Cannot say number of cows; no dairy; no inspection.	No licensed slaughterhouses; no drainage; offal disposed of in a careless way.	Garbage by householder; night soil removed about every 6 months.	No sewerage system.	None.
	None	Householder		
Not given	None licensed			
None	One; not licensed	Householder	None	None.
	None			
About 2,000; no inspection.	Eight; none licensed.	Householder	Dry earth closets; no contract removal.	

TOWNSHIPS.—*Continued.*

Municipality.	Name of M. H. O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Melancthon	James H. Reid, M.D.; Wm. August, sanitary inspector.	Very thorough in extent	Scarlatina, 3 cases, 1 death
Murray	P. J. Clune, M.D.; M. W. Rutton.	Inspection made when complaint is received.	Typhoid, 12 cases, 2 deaths
Malden	T. J. Park, M.D	Physicians report all contagious diseases and placard the houses.	Typhoid, 3 cases; 3 deaths
Middleton	J. W. Renwick, M.D.	Each member of the board inspects a portion of the township.	Diphtheria, 4 cases; 3 deaths
Monmouth	W. Giles, M.D.; A.W. Spears, sanitary inspector.	No inspection except ordered by the board.	Diphtheria, 1 case
Minto	W. A. Harvey, M.D.		Scarlet fever, 2 cases
Mariposa	James Blewitt, M.D.	House to house inspection in villages, school houses and cheese factories by the inspector.	Scarlatina, 9 cases; 1 death; diphtheria, 1 case; typhoid, 4 cases; 3 deaths.
Matchedash	Oliver Bower, sanitary inspector.		None
Maryborough	Jas. J. Cassidy, M.D.		Several cases of typhoid fever existed during the year owing to the low condition of water supply; 1 death; diphtheria, 2 cases.
Maidstone	R. F. Rorke, M.D.		Scarlatina, a few cases; diphtheria, a few cases; typhoid, 2 cases.
Minden	—— Curry, M.D	Inspection when complaint is made.	Scarlatina, 30 cases; 1 death; diphtheria, 14.
Metcalf	A. Nixon, M.D.; W. Henry, sanitary inspector.	Inspected personally	Typhoid, 3 cases
Mersea	C. Cumberlain, M.D.		Diphtheria, 2 cases; 2 deaths; typhoid, 15 cases; 3 deaths

TOWNSHIPS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details of how carried out.	Number of schools: Number of rooms and attendance in each.	Average cubic air space to each pupil.
.....	No	By isolation as far as practicable.	Thirteen schools; No. 1, 20; 2, 34; 3, 27; 4, 25; 5, 25; 6, 16; 7, 25; 8, 30; 9, 35; 10, 20; 11, 16; 12, 20; 13, 25.	No. 1, 397; 2, 150; 3, 240; 4, 352; 5, 570; 6, 567; 7, 173; 8, 672; 9, 350; 10, 684; 11, 625; 12, 416; 13, 395.
Isolation as thorough as possible in houses; no hospital.	No; none	This is carried out by physician.	Fourteen	....
No contagious diseases.	No; none	.....	Six	.....
None	No; none.....	.....	Thirteen	.....
None	None	....	Five	....
No hospital	No	None	Thirteen	600 ....
None	No	Patients confined to rooms, and usual disinfectants.	Twenty-three; three have 2 rooms.	....
None required this year.	No vaccinations reported to local board.	Sulphur fumes and carbolic acid used.	Two; 1 room in each	.....
.....	Vaccination seems to be neglected.	....	....	.. ..
Houses placarded ..	No; 933 in municipality; don't know how many were vaccinated.	Don't know; physicians generally attend to this.	Twelve; 13	....
No hospital; patients isolated at their homes.	No; about 300; none	Thorough cleaning; excreta burned, clothing burnt or boiled; houses fumigated.	Nine; 1 with 2 rooms	250 .....
None	No	Don't know	Eight; 8.....	....
No isolation hospital; patients are isolated at their homes.	.....	....	Fourteen	.....

TOWNSHIPS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Melancthon		One sash and door factory, employing 5 hands; 1 woollen mill, 5 hands; 1 cheese factory, 7 hands.	Clay loam; sub-soil varies
Murray	Yes; no	One fruit evaporator, 14 hands; 4 cheese factories, 8 hands.	Wells and springs
Malden	Physicians supplied	None	Drilled wells
Middleton	None supplied	Two cheese factories; 2 hands in each.	
Monmouth			
Minto	No; forms are supplied to physicians.	Two cheese factories; 3 hands in each.	
Mariposa		Three cheese factories	Wells generally; loam and clay sub-soil.
Matchedash	No need of them	None	Wells; soil, clay loam and sand.
Maryborough			
Maidstone	Teachers usually give verbal notice.	None	Wells generally
Minden	No	None	Wells: soil, sandy loam
Metcalf	None	Two cheese factories	Springs and rock wells
Mersea	Yes		Wells; soil sandy; sub-soil clay.

TOWNSHIPS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal?	State number and kind of noxious trades. How licensed and regulated? (See sec. 62 Public Health Act.)
1,900; no veterinary inspection.	No licensed; all are isolated; offal is removed at once to fertilize the soil.	Garbage is removed.	Sewage removed....	None.
No inspection	Four; 3 licensed....	Householder.....	.....	.....
....	....	....	....	None.
....	None	Householder.....	.....	None.
.....	.....	....	.....	.....
About 1,500; supply milk to factories; no.	Five; mostly fed to hogs.	....	....	None.
No	None	Householder.....	Mostly privy pits...	None.
No report of any disease among the cattle.	.....	Used on land with other manure.	.....	None.
... .	None in township .	....	....	... .
....	Can't say how offal is disposed of.	....	.....	....
The milk of 150 cows sent to cheese factories.	None	Householder.....	No drainage; a few dry earth closets.	None.
Cannot say	None	Householder.....	Don't know	None.
....	.....	Householder.....	....	.....

TOWNSHIPS.—*Continued.*

Municipality.	Names of M. H. O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Mornington	James Johnston, M.D.		Typhoid, 7 cases
Machar	None	None	Diphtheria, 3 cases; 1 death.
Macaulay	Sam'l Bridgland, M.D.		Diphtheria, 1 case
McLean and Ridout	None; T. W. Warren, sanitary inspector.		Diphtheria, 6 cases; 3 deaths; Typhoid, 1 case; no death.
McKim	R. B. Struthers, M.D.	Visits made when necessary.	Scarlatina, 75 cases; 3 deaths; diphtheria, 9 cases; 3 deaths; typhoid, 8 cases.
McKillop	No M. H. O.		No contagious diseases except whooping cough.
McMurrich	H. L. Barber, M.D.; Wm. Pearce, sanitary inspector.	Village of Sprucedale and neighborhood visited by inspector.	Diphtheria, 7 cases; typhoid, 2 cases.
McNab	—— Cranston, M.D.		A few cases scarlatina, a few cases diphtheria; 1 death.
Nissouri, West	P. Ford, M.D; W. Faircloth, sanitary inspector.	A personal inspection under direction of chairman.	Typhoid; 2 cases
Nichol	H. H. Paget, M.D		A few cases of typhoid and diphtheria; physicians fail to report all contagious diseases.
Normandy	P. McLean, M.D.; M. O'Donnell, sanitary inspector.	Sanitary inspector inspects twice a year.	Diphtheria, 5 cases; all recovered.

TOWNSHIPS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
Physicians do the best they can. No isolation hospital.	Not this year, but two years ago vaccination was general; 977 in tp.	Been carried out by physician.	Fifteen; 15	Don't know .....
.....	None	Disinfected by carbolic acid and chloride of lime, under the supervision of a member of board.	Six; 7	.....
No person allowed to leave the premises to mingle with the public.	No; don't know....	.....	Nine; 9.....	.....
According to directions in pamphlets issued by Provincial Board.	No	.....	Four; 4.....	No. 1, 128; 2, 194; 3, 184; 4, 364 ft ..
No hospital; isolation enforced by tp. authorities.	Not compulsory	Sulphur fumes; houses fumigated.	Two; 2; attendance 30 to 45.	2, 152; 3, 225 .....
....	Quite a number of children were vaccinated.	....	....	.....
No hospital, but non-intercourse strictly carried out.	No vaccination in 1895; about 150 in municipality.	Disinfection under direction of M. H. O., by sulphur, carbolic acid, etc.	Six; 6	300 .....
....	No; 1,264 school children.	.....	Fourteen; 16	Don't know .....
.....	Not this year; was well attended to in 1894.	Excreta of typhoid disinfected and buried.	Eleven; one has 2 rooms.	Cannot say .....
....	....	....	....	.....
Houses placarded; no hospital.	No; children from 5 to 16, 1,027; 650 vaccinated in 1894.	By burning sulphur, using chloride of lime, and carbolic acid.	Seventeen schools; 20 rooms.	Don't know .....

TOWNSHIPS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Mornington	Physicians supplied	Two cheese factories, 6 hands; 1 tile and brick factory, 20 hands; 2 saw mills, 10 hands; 1 flax mill, 10 hands; 1 chopping mill, 2 hands.	Wells
Machar	Supplied as required	Saw mills; 60 to 80 hands	Wells
Macaulay			Wells; good water
McLean and Ridout	None supplied		Wells; sandy loam and hard-pan.
McKim	None supplied	None	Clay and quicksand
McKillop			
McMurrich	No	None	Wells; sandy and gravelly
McNab	No	Two cheese factories	Creeks, springs and wells
Nissouri, West	No; no	Four cheese factories, 4 in each; 1 box factory, 6 hands.	Well supply; clay, and clay loam sub-soil.
Nichol			
Normandy	All supplied; yes	Three cheese and 2 butter factories, 3 men in each; 1 woollen factory, 7 employees; 1 flax mill, 8 employees; 2 grist mills, 2 employees each; 6 saw mills, employing about 20 hands; 2 planing and sash factories, 5 hands; 1 foundry, 4 hands; 1 tannery, 4 hands.	Clear springs, wells, and artesian wells; clay and gravel, on granite rock.

TOWNSHIPS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal?	State number and kind of noxious trades. How licensed and regulated? (See sec. 63, Public Health Act.)
Don't know number; only when required; 1 case of tuberculosis.	Two non-licensed; offal burnt; blood given to pigs.	.....	Generally by drainage.	.....
.....	One slaughterhouse; offal used as manure.	Householder.....	Privy pits; a few dry earth closets.	.....
.....	.....	.....	.....	.....
No inspection or examination.	Two; both licensed; offal fed to hogs.	Householder.....	.....	Four storage houses for green hides.
47; no examination.	None	Householder.....	Dry earth closets ..	None.
.....	.....	.....	.....	.....
None in regular dairy business; no examination; no inspection.	....	Householder.... ...	Ordinary privies....	....
.....	.....	.....	.....	.....
About 2,000; none..	Four; offal consumed by hogs.	By householder	Dry earth closets ...	None.
....	.....	....	Two complaints made about the unsanitary condition of water closets.	
Over 2,000; no inspection.	Three; licensed; offal used as fertilizer on land.	By householder	No sewerage system.	None.

TOWNSHIPS—*Continued.*

Municipality.	Names of M.H.O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Nassagawaye			Scarcely any contagious diseases in this township; only a few cases of scarlet fever.
Nepean	G.C. Richardson, M.D.; R. Hill, sanitary inspector.	The sanitary inspector's report says he inspected 210 back yards and closets; ordered 18 to be cleaned up.	Diphtheria, 10; scarlet fever 14; typhoid, 3.
Norwich, North	W. R. Watson, M.D.	Sanitary inspector makes general inspection in the month of June.	Scarlatina, 3 cases; typhoid, 2 cases.
Nottawasaga	D. McAllister, M.D.; Colin McDougall, sanitary inspector.	Inspector reports township in good condition.	None
Nissouri, East	R. E. Fowler, M.D.; H. G. Gourley, sanitary inspector.		Scarlatina, 10 cases; typhoid, 2 cases.
Nipissing	J. A. Porter, M.D.; F. Sloman, sanitary inspector	House to house inspection	None
Osnabruck	—— Jamieson, M.D.; A. Wesley, sanitary inspector.	Premises inspected	
Oxford	Jones, M.D		
Ops	T. W. Pool, M.D.; W. F. O'Boyle, sanitary inspector.	Every physician attending patients, reports to M.H.O. when any contagious disease is met with.	Scarlatina, 1; diphtheria, 4; typhoid, 4.
Orford	P. N. Davie, M.D.	Only very few complaints and of minor importance.	Typhoid, 1 case
Oso	H. N. Coulter, M.D.; Kilborn, M.D.		Typhoid, 10 cases
Oro	W. H. Clutton, M.D.; R. W. Metcalf.		Scarlatina, 20 cases, 1 death; diphtheria, 2 cases.
Oxford, E.	J. McClurg, M.D.		Diphtheria, 1 case; typhoid, 5 cases.

TOWNSHIPS—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
All patients isolated.	No; no	Under the supervision of M.H.O.	9, 10	.....
.....	Not compulsory	.....	24	.....
The dwellings all isolated.	No: don't know	.....	11.....	.....
.....	.....	Using chloride of lime, etc.	3; attendance, 33, 22, 25.	.....
No hospital.....	No; none.....	.....	Twenty-three; 23 rooms.	.....
None	No.....	None	Sixteen; 18; average, 20.	.....
Patients are generally confined in a room by themselves and attended by the nurse and physician only.	Not compulsory.....	Chiefly fumigation with sulphur.	Eleven; all brick buildings; average attendance, 34.	400 cubic feet. .....
Had no occasion....	No, but generally carried out; about 50 vaccinated.	None of note.....	Ten sections; one 2 rooms, one 3 rooms, balance have 1.	.....
No isolation hospital	No; no record.....	Disinfection carried on under direction of attending physician.	Nine; 1 room in each.	Lots of space.....
.....	No	.....	Sixteen	.....
No isolation hospital; children kept from school.....	All children were vaccinated 1894.	Carried out by physician in charge.	Six; No. 3, 25; No. 4, 30; No. 5, 24; No. 6, 32; No. 7, 46; No. 8, 25.	.....

TOWNSHIPS—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Nassagawaye			
Nepean			
Norwich, North	None	Five cheese factories, 3 hands employed in each.	Wells; clay loam
Nottawasaga	Supplied M.H.O.	Don't know	Wells used; sub-soil gravel and rock.
Nissouri, East	No	Six cheese factories, 3 hands each.	Springs and good wells; generally hard clay, and in some cases gravel and sand.
Nipissing	No	None	Wells
Osnabruck	No	None	Wells; good water
Oxford	No; no	Nine cheese factories; 20 employees.	Sandy loam
Ops	Forms used	No factories except one large brick saw mill and cheese factories; employees, 20.	The water supply is good.
Oxford		None	Usually good
Oso	Don't know	Four cheese factories	Spring wells; good water
Oro	Not supplied		Wells; sand, gravel and clay.
Oxford E	None	Three cheese factories.	Wells

TOWNSHIPS—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets If so is there contract removal?	State number and kind of noxious trades. How licensed and regulated? (See sec. 23 Public Health Act.)
.....	.....	.....	.....	
.....	Slaughter houses inspected 6 times during the year.	.....	.....	
Cannot give number.	3; none licensed....	Householder.....	None	
None	One licensed.....	No garbage or night soil allowed to accumulate.	.....	
.....	None in municipality.	.....	.....	
None	None	Householder.....	Dry earth closets ...	
5,129; no; none....	One or two; none licensed, but are inspected.	Householders.....	Dry earth closets ...	None.
.....	None.....	Householder.....	.....	None.
No dairy proper; every farmer keeps a few cows; no cases of tuberculosis this year as any having symptoms were ordered to be slaughtered by veterinary surgeon.	Four; all licensed; fed to hogs.	Dry earth being used.	.....	None.
None	.....	Householder.....	.....	None.
About 600; no inspection.	.....	Householder.....	.....	.....
.....	.....	Householders.....	.....	.....
None except those belonging to farmers.	Three; none licensed; offal fed to pigs.	Closets used	On the farms	None.

TOWNSHIPS.—*Continued*

Municipality.	Names of M.H.O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Oxford, N	L. McWilliams, M.D.; J. H. Wickins, sanitary inspector.		Scarlatina, very few cases; diphtheria, very few cases; typhoid, none.
Oxford, W		Premises in good sanitary condition.	No typhoid or other contagious cases in township this year.
Papineau	None	Limited to the inspection of members of Board.	Typhoid, 1 case
Perry	H. L Barber, M. D.; Chas. McPhail, sanitary inspector.		Diphtheria, 2 cases
Pelham			Diphtheria, 1 case; scarlet fever, 1 case.
Plympton	P. McG. Brown, M.D.		
Puslinch	A. Munroe, sanitary inspector.	General inspection spring and fall; immediate attention given to complaints.	Typhoid, 6 cases
Pickering	No M.H.O.; 3 sanitary inspectors.	General inspection made by sanitary inspectors.	Scarlatina, 2 cases; diphtheria, 8 cases, 2 deaths; typhoid, 6 cases, 1 death.
Palmerston	John Elkington, M.D.	Township is divided into four districts and each member inspects his portion.	Scarlatina, 4 cases
Pembroke			Several cases of typhoid in adjacent township; the number of deaths from all causes in township was 6.
Proton	R. A. Mitchell, M.D.	Five divisions; one member attends to each.	Several cases of diphtheria, scarlatina and typhoid.
Pelee	None		None
Percy	J. M. Clemenson, M.D.; A. M. Sanborn, sanitary inspector.	Thorough inspection by members of Board.	Scarlatina, 7 cases; diphtheria, 5 cases, 1 death; typhoid, 2 cases.

TOWNSHIPS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
None; no.....	No.....	None	Three	.....
....	....	.....	... .	... .
No hospital, but township has given a grant towards isolation hospital of Mattawa town and patients may be sent there.	No; 170 between the ages of 5 and 16; don't know, but very few, if any.	Ordinary methods of a physician.	Three; 3; average, 26.	About 200 cubic feet.
Dwelling placarded.	Yes; school children were all vaccinated last year.	.....	Seven; 1 room in each.	....
.....	.....	.....	....	.....
.....	No	.....	Nineteen	Don't know .....
No hospital; the dwellings of patients are isolated.	Vaccination was attended to in 1894.	....	Thirteen schools; 1 school has 2 rooms, the others 1 each; 1,229 school children.	.....
No hospital; patients isolated in homes.	No; don't know....	Usual disinfectants are made use of.	Twenty-one schools; 3 have 2 rooms.	Don't know .....
Houses placarded ..	No; about 240 in 6 sections.	Plenty of boiling water and soap; carbolic acid, etc.	Six; 6	.....
.....	.....	....	... .	.....
Placarding houses ..	Not carried out	M. H. O. acts in any case reported.	Seventeen; 17 ...	Sufficient....
.....	No; 280; none	.....	Four; 1; attendance, 101, 103, 46, 36.	.....
Patients confined to the house.	No; 697; only 8 children vaccinated this year.	Paper removed from walls; walls scrubbed; carbolic acid solution used; everything fumigated with sulphur fumes.	Seventeen; 20	.....

TOWNSHIPS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Oxford N.	None.	Three cheese factories; 3 hands.	Wells; clay and sand.
Oxford W.			
Papineau	Not supplied	None	Soil of a sandy nature with a good deal of rock and gravel.
Perry			Springs and wells.
Pelham			
Plympton		Three cheese factories; 2 hands in each; 1 butter factory, 2 hands.	Artesian and surface wells
Puslinch	Notification supplied and used by sanitary inspector.	None	Springs and wells; soil, sandy loam; sub-soil, gravel.
Pickering	Forms supplied physicians; none for teachers.	One apple evaporating factory, 14 hands; 1 pump factory, 8 hands; 1 wood turning factory, 10 hands.	Wells; clay, sand and gravel.
Palmerston	No	No	Wells and springs.
Pembroke			
Proton	None supplied.	Two cheese factories	Wells
Pelee	When necessary	None	Lake water.
Percy	M. H. O. only.	None	Wells; sand and gravel clay sub-soil.

TOWNSHIPS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal.	State number and kind of noxious trades. How licensed and regulated? (See sec. 63, Public Health Act.)
2,000: no	Four licensed; offal boiled.	Householder.....	.....	None.
.....	.....	.....	.....	.....
None.....	Two; none licensed; natural drainage; offal fed to hogs.	No special arrangement; by householder generally.	No special arrangement.	None.
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	None.....	.....	.....	.....
None except farmers' milch cows; no examination of herds.	None licensed; all are kept in a sanitary condition.	By householder	By householder; dry earth closets are gradually coming into use.	None.
Don't know; no inspection.	Six; 6; natural drainage.	....	.....	None.
900; no; none.....	None.....	Put on land	....	None.
.....	.....	.....	.....	.....
Not known; no; none.	None.....	No system.....	.....	None.
....	None.....	.....	.....	.....
Don't know; no inspection.	One; no license	Householder.....	.....	.....

TOWNSHIPS.—*Continued.*

Municipality.	Names of M. H. O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Pittsburg			Municipality is free from all contagious diseases; no complaints have come before the Board.
Pilkington	— Robertson, M.D		Typhoid, 2 cases
Rolph, Buchannan and Wylie.	—. Gray, M.D.	None	None
Raleigh	S. N. Young, M.D.	No system of general inspection.	Scarlatina, 4 cases; typhoid, 13 cases.
Radcliffe and Raglin	Joseph Kinder, sanitary inspector.		Scarlet fever, 4 cases, 1 death.
Rainham	John Fry, M.D.		Typhoid, 1 case
Rama	W. C. Gilchrist, M.D.	When any outbreak occurs premises are inspected.	Scarlatina, 5; diphtheria, 15; typhoid, 5.
Rowdon	None	Members of Board look after the inspection.	Diphtheria, 1, 1 death
Rochester	D. Bichard, M.D.; J. Strong, sanitary inspector.	When inspector is notified.	Scarlatina, 2; typhoid, 2
Russell	D. S. McDougall, M.D. J. Brisson, sanitary inspector.		Diphtheria, 8 cases, 4 deaths; typhoid 2.
Reach	None	Inspection by members of Board when complaint is made.	Several cases of diphtheria, 1 death reported; several cases typhoid, 1 death; physicians fail to report the number of cases.
Sault Ste. Marie	C. Scherk, M.D.		Scarlatina, 1 case, 1 death
Sarawak	C. W. Lang, M.D.; J. C. Atkins, sanitary inspector; Wm. Lee, sanitary inspector.	General inspection by sanitary inspectors.	Scarlet fever, 7 cases, 1 death; diphtheria, 4 cases; typhoid, 3 cases.
Sandfield	Wm. McDonald, M.D.		None
Scugog	—. Clemens, M.D		Diphtheria, 4 cases, 2 deaths; typhoid, 3 cases, 1 death.
Stanhope and Sherbourne, etc.		Inspection by members of Board and sanitary inspector.	Scarlatina, 2 cases; diphtheria, 2 cases.

TOWNSHIPS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
.....	.....	.....	.....	.....
None	No; none	Disinfection by ordinary means.	Five; 5; about 40 ..	.....
....	No.....	....	Six; one room in each.	....
No hospital; kept separate; houses placarded.	Yes; 1,007; none...	Fumigated by burning sulphur and washing with carbolic acid solution.	Twenty; one room; average attendance about 30.	350 cubic feet. .....
....	....	....	.....	.....
....	.....	....	Six schools	....
Houses isolated; no isolation hospital.	No; cannot say.....	Rooms washed with carbolic acid soultion, and fumigated with sulphur, etc.	Five schools; 5 rooms; average 40.	Don't know .....
... .	No..... ..	Under attending physician.	Fifteen.....	.....
....	.....	... .	Ten.....	.. ..
General isolation; placarding houses.	No; 850; about 20 vaccinated.	Houses fumigated; schools closed; sulphur and carbolic solution used.	Fourteen; 16; attendance 50.	Two hundred and fifty.
... .	No; 852 between the ages of 5 and 16, 327 between 16 and 21.	....	Sixteen	... .
None	.....	....	Five.	Sufficient .... ..
Isolation in houses..	No; 370; none in 1894.	Dr. Lang attends to the disinfection.	Four	... .
.. ..	No; none	... .	Three; three	....
Isolation in their homes.	Not compulsory; 131	Such as is ordered by attending physician.	Three; three	.....
None	No; 93; don't know	In diphtheria cases under direction of physician in charge.	Nine; nine ..	....

TOWNSHIPS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Pittsburg			
Pilkington	None	None	Gravel
Rolph, Buchannan and Wylie.	No occasion to use them.	None	Sandy loam
Raleigh	Supplied, but not used.	None; except one evaporating factory, 20 hands; one cheese factory, 3 hands.	Wells; blue clay
Radcliffe and Raglin			
Rainham			
Rama	None	None	Wells; principally clay soil.
Rowdon	None	Ten cheese factories; 2 hands in each.	Wells; gravel and clay
Rochester		One cheese factory	Generally clay soil
Russell	Yes	Woollen factory, 10 hands; cheese factory, 10 hands.	Sandy loam
Reach	No	None	Generally sub-soil
Sault Ste. Marie	No	None	Sand and clay
Sarawak	Yes; yes	None	Wells and springs and lake water, which is considered the best.
Sandfield		None	
Scugog	No	None	Wells and springs
Stanhope and Sherbourne, etc.	None	One cheese factory, 3 bands	Rivers, lakes and wells

TOWNSHIPS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal?	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act).
.....	.....	.....	.....	.....
None.....	None.....	Householder . . .	.....	.....
No.....	No slaughterhouses.	.....	.....	.....
One dairy farm for supplying Chatham with milk; no inspection.	Three slaughter-houses; open drains; offal fed to hogs.	By householder.....	Privy pits.....	None.
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
Cannot say; no tuberculosis.	None.....	.....	.....	.....
7,383 cattle in township.	Two; no license....	Householder.....	.....	.....
.....	.....	Householder.....	.....	.....
4,000 cows.....	Two; none	Householder.....	.....	.....
.....	.....	.....	.....	.....
Rural district, no inspection.	None	Householder	.....	None.
Private dairies.....	One; no license	Householder	.....	.....
.....	None	Householder	.....	.....
No dairies....	None	Householder	.....	.....
Thirty; no; none ..	None	Householder	None	None.

TOWNSHIPS.—*Continued.*

Municipality.	Names of M. H. O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Saltfleet	Leeming Carr, M.D		Three cases diphtheria; 3 scarlet fever; 4 typhoid fever; physicians living outside the tp. fail in making reports of diseases.
Sandwich, East	Joseph Reannie, M.D.; H. Vanderlander, sanitary inspector.	Inspection of nuisances when M.H.O. requests.	Scarlatina, 3 cases; diphtheria, none; typhoid, none.
Southwold		Inspection of slaughterhouses, pig pens, cheese factories, school premises and dairies was made and found in a sanitary condition.	Typhoid, 3 cases
Seneca	None	Inspection by Local Board	None
Sunnidale	G. Hunt, M.D.; T. Macham, sanitary inspector.		Diphtheria, 1 case; typhoid, 1 case.
Strong	D. Carmichael, M.D.; John Pagit, sanitary inspector.	No particular method	None
Sombra	D. K. Stenton, M.D.	None	Scarlatina, 10 cases; diphtheria, 3 cases
Shefield	H. W. Wilson, M.D.; L. Loyst, sanitary inspector.	Sanitary inspector visits premises and vacant lots and inspects closets, yards, etc.	Typhoid, 4 cases
Sabastapol	None	None	Diphtheria, 10 cases, 2 deaths
Sherbrooke	N. Hopkins, M.D.		
Sullivan	G. N. Cook, M.D.; Wm. Smith, sanitary inspector.		Scarlatina, 32 cases, 3 deaths.
Saugeen	—. Veitch, M. D.; Robert Smith, sanitary inspector.	Sanitary inspector reports all premises in a sanitary condition.	Typhoid, 3 cases
Scarboro'	O. Sisley, M.D.	General inspection once a year.	Scarlatina, 7 cases, 1 death; diphtheria, 4 cases; typhoid, 8 cases, 1 death.
Sophiasburg	J. Crayan, M.D.		None
Sydenham	A. C. Sloane, M.D.; Charles McArthur.		Scarlatina, 41 cases; diphtheria, 15 cases; typhoid, 4 cases.

TOWNSHIPS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
.....	.....	.....	.....	148 .....
Patients are isolated in their homes.	General vaccination in 1894.	House placarded and thorough disinfection by M.H.O.	Eight; eleven	.....
.....	.....	.....	.....	.....
Placard; isolate family as well as possible.	No	Burning infected clothing; fumigation, etc.	Twelve; twelve	Don't know .....
.....	No	Isolation and disinfection.	Twelve	.....
No	No	.....	Six	.....
Placarding; infected persons not allowed to mingle with the public.	General in 1894; none in 1895.	Clothing and furniture cleaned; infected apartments fumigated.	Sixteen	Don't know .....
Patients kept in most isolated part of house and disinfecting excreta.	No; don't know	.....	Sixteen	.....
None	None	None	Three	Don't know .....
None	No	.....	Two	One, 220; one, 300..
Isolated six weeks in home of patients.	No; 949 in tp	Fumigation by sulphur, etc.	Fifteen; sixteen....	.....
As ordered by the attending physician.	Vaccination not compulsory; 610 children in tp.	As done by physicians in attendance; no isolation hospital.	Seven; seven	.....
Patients isolated in homes.	No	Carbolic acid solution; sulphurous fumes.	Twelve	.....
None	None	Not necessary	Fourteen	.....
Isolated in homes...	No; none vaccinated.	Ordinary disinfectants used.	Sixteen	.....

TOWNSHIPS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Saltfleet	No	One cheese factory, 2 hands	
Sandwich, East			
Southwold			
Seneca	None	Two cheese factories, 4 hands; 2 saw mills, 8 hands.	Wells; clay
Sunnidale	None	None	Principally wells
Strong		One cheese factory	Light soil
Sombra	None	None	Generally clay
Sheffield	Physicians only	None	Wells
Sabastapol	No; no	None	Springs, wells and creeks
Sherbrooke		None	Wells; clay sub-soil
Sullivan			Wells; gravel and clay
Saugeen	Supplied	Two cheese factories, 2 hands in each.	Wells, rivers and creeks
Scarboro'	Not supplied	None	Heavy clay and loam
Sophiasburg	None	Six cheese factories	Clay and rock
Sydenham	Yes	None	Wells; clay loam and gravel

TOWNSHIPS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal?	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act).
....	Three; none licensed; by ditches; offal burned and buried.	Householder	Privy pits generally.	None.
....	....	....	....	....
.....	....	....	.....	....
Don't know; no; none.	Two; offal fed to hogs; isolated.	Householder	Closets	....
About 1,000; no inspection.	.....	Different ways.....	.....	....
....	.....	Householder	Dry earth closets...	None.
Don't know; no inspection.	Don't know	Householder	No contract for removal.	....
Don't know	None	Householder	Dry earth closets...	None.
549 cows; no inspection; no examina'n.	None	Householder.....	.....	None.
None	None	Householder.....	Closets	None.
.....	One	....	.....	.....
Don't know; no inspection or examation.	Five slaughterhouses	Householder.....	.....	.....
Don't know; no inspection.	Eight; offal is fed to pigs.	Householder.....	.....	.....
Don't know	None licensed	Householder.....	.....	.....
None	None	.....	.....	....

TOWNSHIPS.—*Continued.*

Municipality.	Names of M. H. O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Somerville	R. S. Frost, M.D.	None	Diphtheria, 12 cases
Scott		Municipality in a good sanitary condition.	
Stamford	John M. Dee, M.D.; Wm. C. Swane, sanitary inspector.	As provided in Act	Diphtheria, 2 cases; typhoid, 2 cases.
Stafford	D. Rattray, M.D.		None
Stisted	W. C. Fraser, M.D.	Each member of Board inspects his own district.	Diphtheria, 4 cases; 1 death.
Stephen	H. Wichett, M.D.		Scarlatina, 4 cases; diphtheria, 8 cases; typhoid 10 cases.
St. Vincent		Municipality is in a most satisfactory condition as regards sanitation.	Scarlatina, 5 cases; diphtheria, 2 cases.
Tilbury Centre	A. Lemire, M.D.; N. Mibert, sanitary inspector.		Typhoid, 12 cases; 3 deaths.
Tecumseth	——Law, M.D.		Diphtheria, 5 cases; 3 deaths.
Thorah	A. Grant, M.D.; S. Wallace, sanitary inspector.	Each member of Local Board keeps supervision of his district.	Diphtheria, 2 cases
Thorald	H. Park, M.D.	General inspection each spring and when complaints are made.	Diphtheria, very few; typhoid, 1 case.
Thornberry	W. B. Fowler, M.D.	Inspection made on information.	Typhoid, 2 cases
Townsend	A. C. Duncombe, M.D.	None	Diphtheria, 1 case; typhoid 4 or 5 cases; 1 death.
Tosorontio	J. J. Williams, M.D.		Scarlatina, 10 cases; diphtheria, 1 case; typhoid, 2 cases.
Torbolton	D. Kyle, M.D.		None
Usborne	A. K. Ferguson, M.D.	Slaughterhouses are inspected yearly, other premises upon order of M. H. O.	Scarlatina, 4 cases; typhoid, 11 cases; 1 death.

TOWNSHIPS.—*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
Isolated in their homes.	None in 1895	Patients disinfected before mingling with public.	Nine	.....
....	.....	....	.....	.....
In their own rooms .	No.....	Sulphur fumes, etc..	Eight ; eight	.....
....	Not this year	....	Four ; 4 ; 445 school children.	.. ..
No	No ; 139.....	Sulphur fumes, chloride of lime, etc.	Five ; five.....	.....
....	Quite a number vaccinated.	.....	Thirteen	.....
....	.....	.....	.....	.....
....	Yes....	.....	Nine ; eleven.....	One hundred and sixty.
None.....	Don't know	....	Twenty-one	....
No isolation hospital patients isolated in their own homes.	No ; 414 school children.	Disinfected in the ordinary way.	Four ; 4 rooms ; [illegible]	[illegible] cubic feet.
....	.. ..	.....	Eight	.....
Buildings placarded.	No ; school population 750.	None.....	Thirteen schools ; 13 rooms.	....
None	No ; don't know	Don't know	Twenty-two ; don't know.	Don't know .....
Placed in room up stairs.	No ; 337.....	Stools disinfected ; sheets hung over doors ; carbolic acid solution used, sulphur burned.	Eight	From 350 to 450 cubic feet.
No	... .	... .	Five	.....
No isolation hospital, inmates not allowed to mingle with the public.	No ; 763 ; about 50.	Houses isolated ; excreta from patients buried ; all linen in room disinfected daily, etc.	Twelve schools ; 14 rooms.	Two hundred.....

TOWNSHIPS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Somerville	Physicians supplied only.	None	Clay and limestone
Scott			
Stamford	M. H. O. only	One bone mill, 3 hands; one grist mill, 2 hands; one wine factory, 3 hands.	Clay, quicksand and gravel
Stafford	No	None	Wells; clay soil and gravelly bottom.
Stisted	None	None	Wells; sandy loam
Stephen	Yes	None	Wells; clay and sand
St. Vincent			
Tilbury Centre	No	None	Clay loam
Tecumseth	None	None	Clay loam
Thorah	None	Two brick yards, 1 pottery; employing 12 and 7 hands respectively.	Wells; clay loam, sub-soil, gravel and clay.
Thorald	None	None	Wells; clay
Thornberry	Yes, when necessary		All wells
Townsend		Three cheese factories	Wells; sandy loam
Tosorontio	None	None	Wells; sandy soil, sub-soil gravel.
Torbolton		One cheese factory; 1 hand.	
Usborne	Yes; yes	One cheese factory; 1 hand.	Clay, gravel bottom

TOWNSHIPS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal?	State number and kind of noxious trades. How licensed and regulated (See sec. 63 Public Health Act).
None	None	Householder		
Eighty cows; no inspection; no examination.	Four; natural drainage.	By householder		1 bone mill licensed during pleasure of council.
Don't know	None	Householder		
None	None	Householder		
Don't know; no; none.	Three; none licensed.	Householder		
No inspection	None		Dry earth closets	None.
None	Two licensed	Householder		
None; no inspection.	One; no drainage; offal boiled.	Householder	Sewage generally buried.	None.
No	Two; surface drainage.	Rural district	Privy vaults	None.
Don't know; no examination.				
Don't know; no inspection.	Two; no license	Householder		
Inspection is made in all suspicious cases.		Householder	No system	

TOWNSHIPS.—*Continued.*

Municipality.	Names of M. H. O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Uxbridge			Diphtheria, 1 case; typhoid, 1 case.
Vaughan	T. H. Robinson, M.D.; R. Rumale, sanitary inspector.		
Vesper	W. Wallivin, M.D.	Inspection made when necessary.	
Walsingham, S.	H. Terry, sanitary inspector.	None	Diphtheria, 1 case
Walsingham, N.	B. Robinson, sanitary inspector.	None	None
Woolwich	W. Robinson, M.D.	Inspection made when complaints come in.	Scarlatina, 9 cases; 1 death; typhoid, 30 cases; 2 deaths.
Wallace	J. W. Thompson, M.D.; John Willoughby, sanitary inspector.	Personal inspection by members of Board.	Scarlatina, 2 cases; typhoid, 11 cases, 2 deaths.
Wainfleet	W. B. Hopkins, M.D.	Cursory by M. H. O.	Scarlatina, about 40 cases; diphtheria, a few isolated cases; typhoid, 29 cases.
Waterloo	A. H. Rahacks, M.D.; Owen Reist, sanitary inspector.	General inspection under direction of M.H.O.	Typhoid, 40 cases.
Wellesley	Wm. Morton, M.D.	Inspection made when asked for. Township has no more than the average share of perplexities.	Typhoid, 12 cases, 1 death.
Wawanosh, E.	John McAble, M.D.	No regular system	Scarlatina, a goodly number of cases; typhoid, 4 cases.
Wawanosh, W.	T. E. Case, M.D.		Scarlatina, a number of cases of scarlatina and typhoid.
Williamsburg		No complaints of any contagious diseases in township until the 18th December; 3 cases reported then.	
Wilberforce and N. Algona.	John Channonhouse, M.D.		Scarlatina, 6 cases; diphtheria, 3 cases, three deaths.
Whitchurch	H. Coulter, M.D., W. True, M.D.; G. H. Powell, sanitary inspector.	Nothing done except complaint is made.	Scarlatina 2 cases; diphtheria, 5 cases, 1 death.

TOWNSHIPS —*Continued.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
Isolated by attending physician.	No..	Disinfected by attending physician.	Twelve; twelve	.....
.....	.....	.....	Nineteen	.....
No hospital; patients isolated in their dwelling.	No, yes; don't know.	.....	Ten	.....
No particular method.	No.....	.....	Ten.....	.....
None.....	No.....	None	Nine	.....
.....	General vaccination in 1894.	.....	Twelve.....	.....
No	No; general vaccination in 1894.	Yes.....	Fifteen.	Sufficient.....
None.....	.....	Houses fumigated...	Twelve.....	.....
By placarding buildings.	General vaccination in 1894.	Carbolic and sulphur fumes.	Twenty-seven; average attendance about 35 in each.	.....
.....	.....	.....	.....	.....
No methods	No.	Very little done.....	.....	.....
.....	No; the M.H.O. visited schools in 1894 and vaccinated those who wished to have it done.	.....	Eight; 9.	.....
.....	.....	.....	.....	.....
Patients isolated in their homes.	No; about 490; none.	.....	Eight; 8.	.....
Houses placarded...	No	Physicians in attendance give orders.	Fifteen; 15	.....

TOWNSHIPS.—*Continued.*

Municipality.	Forms for notification by teachers and M. H. O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and the number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Uxbridge	Yes	None	Sandy loam, quicksand
Vaughan			
Vesper	No	None	Wells; soil varies
Walsingham, S.	No	Two cheese factories	Wells
Walsingham, N.	No; no	Three cheese factories	Wells
Woolwich			Wells and springs; soil light loam.
Wallace	No	Three cheese factories; 2 hands in each.	Wells
Wainfleet	None	None	Wells and river
Waterloo	None supplied		Usually gravel sub-soil
Wellesley			
Wawanosh, E	Not supplied		Good
Wawanosh, W			
Williamsburg			
Wilberforce and N. Algona.			
Whitchurch	None	None	Wells

TOWNSHIPS.—*Continued.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal.	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.)
None	None			None.
	Three			
No record	None	Householder		None.
Don't know; no; no.	None			
Don't know; no; no.	None			
None; veterinary inspection made in 2 cases, animals slaughtered.	Two	Householder		
	One	Householder		
No dairies		Householder	Buried	None.
333 cows; veterinary inspection; no examination.	Thirteen slaughterhouses; natural drainage; offal fed to hogs.	Carted on to land by householder.		Glue factory; unlicensed.
				None.
No inspection	None	As most convenient.		None.
				None.
				None.
				None.
No inspection	Four meat associations have four slaughterhouses.		Pits and dry earth	None.

TOWNSHIPS—*Concluded.*

Municipality.	Names of M.H.O. and sanitary inspector.	State extent and methods of general inspection.	Contagious diseases.
Westminster	A. G. Routledge, M. D.; T. Tomlinson, sanitary inspector.	....	A large number of cases of typhoid.
Woolwich	W. O. Robinson, M.D	Inspection made when required.	Scarlatina, 1 death; typhoid, 32, 2 deaths.
Wilmot	W. R. Nichols, M.D.; J. Wahl, sanitary inspector	Annual inspection made and special on complaint.	Diphtheria, 6 cases; typhoid, 12 cases.
Watt	.....	Each member of the Board looks after his district.	None
Wollaston	Wm. Dafoe, M.D.; A. Watt, sanitary inspector.	General inspection by sanitary inspector.	Diphtheria, an outbreak in February and March.
Yarmouth	R.L. Sanderson, M.D.; W. O. Pollick, sanitary inspector.	By sanitary inspector	Small pox, 1 case
Yonge and Escott "Front".	I. W. Lane, M.D.; W. I. Malloy, sanitary inspector.	No general inspection made; inspection made when required.	None
York	T. I. Page, M.D.. C. V. Michell.	Inspection by sanitary inspector.	Diphtheria, 15 cases; typhoid, several cases.

TOWNSHIPS—*Concluded.*

Isolation of contagious diseases. State methods and whether any isolation hospital.	Has vaccination been compulsory? State school children in municipality. How many vaccinated in 1895.	Disinfection of contagious diseases. Give details and how carried out.	Number of schools, number of rooms, and attendance in each.	Average cubic air space to each pupil.
London Hospital used if necessary.	Well attended to. ..	.....	Twenty-two; 24....	.....
.....	.....	.....	.....	.....
No; voluntary vaccination; no hospital.	.....	Disinfection is practised; washing room, bed clothing and patient with bi-chloride solution.	Twenty-one.....	.....
None	No.	.....	Seven	.....
.....	No.....	Usual disinfectants used.	Eight	.....
....	No; children have been vaccinated at school by order of the Board.	....	Twenty-one	.....
None	None	None	Eighteen; 19	Don't know .....
Such as can be employed in private houses.	No; cannot say.....	Attending physician does this under the supervision of M. H.O.	Twenty-four..... ..	.....

TOWNSHIPS—*Concluded.*

Municipality.	Forms for notification by teachers and M. H.O. of contagious diseases. Are both supplied? Do both make use of them?	Number of factories and institutions. State their character and number of employees in each.	Water supply. Where wells are used give character of soil and sub-soil.
Westminster	.....	Six cheese factories	All wells; all kinds of soil ..
Woolwich	.....	.....	.....
Wilmot	Not supplied	Flax mill, 7 hands; foundry, 7 hands; linseed oil mill, 30 hands; Tannery, 2 hands; cigar box factory, 8 hands; two grist mills, 5 hands; six chopping mills, 12 hands; nine blacksmith shops, 1 to 2 each; three cheese factories, 2 each; one creamery, 2; six tailor shops, 2 to 3; six shoe shops, 1 to 2; five butcher shops, 1 to 2; two cooper shops, 1 to 2; three cider mills, 1 to 2.	Wells; clay and sand loam..
Watt	Supply themselves....	One cheeese factory....	Heavy clay to sand .....
Wollaston	Don't know..... ...	Two cheese factories	Generally from springs.....
Yarmouth	.....	.....	.....
Yonge and Escott "Front."	Don't know.....	.....	Wells; gravel and clay .....
York	....	One bolt works, one woollen mill, one stove factory, one fat rendering factory, one paper mill, two potteries, three grist mills, four brick yards.	Wells and springs; mostly clay soil.

TOWNSHIPS—*Concluded.*

No. of dairy cows. Is there medical or veterinary inspection? Give details of any examination of herds for tuberculosis.	Slaughterhouses. Give number licensed. How drained and how offal is disposed of.	Disposal of garbage and night soil, whether by contract or only by householder.	Sewage. How disposed of, whether by dry earth closets. If so, is there contract removal?	State number and kind of noxious trades. How licensed and regulated? (See sec. 63 Public Health Act.)
No examination or inspection.	Four licensed	By householder	Pits and dry earth closets.	None.
....	....	.....	.....	None.
Number unknown; no inspection in 1894; tuberculosis found in cattle 1895; 2 cattle destroyed.	Five; no license; buried.	Buried by householder.	Dry earth closets; no contract.	None.
400; none	None	Householder.....	.....	....
Don't know	None	....	.....	None.
No inspection	Seven adjoining city of St. Thomas under inspection.	.....	.....	None.
No; none	None	Householder.....	.....	.....
A great many; no tuberculosis.	Some 20; offal fed to hogs.	Householder.....	Householders; no contract removal.	.....

ANNUAL REPORT

OF THE

BUREAU OF INDUSTRIES

FOR THE

PROVINCE OF ONTARIO

1895.

PARTS I, II AND III.—AGRICULTURAL STATISTICS.

(PUBLISHED BY THE ONTARIO DEPARTMENT OF AGRICULTURE.)

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FOURTEENTH ANNUAL REPORT

OF THE

BUREAU OF INDUSTRIES

PARTS I, II AND III.

1895.

To the Honorable the Minister of Agriculture:

Sir,—I have the honor to present herewith Parts I, II and III of the fourteenth annual report of the Bureau of Industries, being the Agricultural Statistics of Ontario for the year 1895.

I have the honor to be, Sir,

Your obedient servant,

C. C. JAMES,

Secretary.

Toronto, Oct. 12th, 1896.

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PART I.

THE WEATHER AND THE CROPS.

THE WEATHER.

The nature and quality of the soil of course have much to do in determining the success or failure of crops, but temperature, precipitation and sunshine are also most important factors. Early or late frosts, and alternating freezing and thawing in winter, may do much injury, and floods or drouth may ruin promising growing crops, while on the other hand seasonable temperature and timely snow or rain falls, and a due share of sunshine, usually mean splendid crops matured in the best possible condition. Hence the interest attached to the following weather tables.

The following is extracted from the June Bulletin: "The crop season of 1895 began with a deficiency of rain, the precipitation of the four months, November to February, having been 2.89 inches less than the average. This was further intensified by a very low rainfall in March, April and May, the total for these three months being two inches less than the average. The total precipitation for March, April and May, 1895, was 5.53 inches, for May alone in 1894 it was 5.72 inches. May was a month of extremes. It began with high temperature, which continued for eleven days, during which there were frequent thunder-showers. From the 12th to the 21st was a period of low temperature, heavy frosts resulting over a large portion of the continent. Ice was formed in many places from $\frac{1}{4}$ to $\frac{3}{4}$ inch thick. After the 21st the weather became more moderate, although on the 27th and 28th the temperature fell nearly to freezing. These May frosts were exceedingly severe in nearly all parts of the Province, as well as in the adjoining States. The second frost was felt in many places in the southwest, where the first had done little damage. The inland and higher sections suffered exceedingly. A narrow strip along Lake Erie and Ontario was more fortunate, especially where sheltered by higher land. These frosts have done extensive damage to the more tender fruits, early vegetables, nut-bearing trees, imported shrubs, young hedges, and, in some districts, also, to the fall wheat and spring grains; but the probability is that the amount of injury has been somewhat exaggerated in many districts, and that many crops will recover. The month ended excessively warm. The highest records for the month were as follows: Rockliffe, 97 degrees; Stony Creek, 97; Toronto, 95.7; Lindsay, 94.7; London, 94; Ottawa, 93.5; Saugeen, 85.9. The lowest records were as follows: Lambton county, 23; Woodstock, 23.7; London, 25; Saugeen, 25.1; Rockliffe, 26; Lindsay, 27.2; Ottawa, 27.5; Toronto, 27.9; Stony Creek, 29. At Rockliffe and in Lambton county the range was 71 degrees. In 1894 the greatest range was 51 degrees (Stony Creek, 33 to 84 degrees)."

From the August Bulletin we quote: "An unusual occurrence in temperature is worth noting in the fact during June and July the highest relative temperature occurred on the Upper Ottawa and the lowest in the county of Oxford, Woodstock during June being the only one of the ten stations showing a temperature below the average of the Province. This is supposed to have been caused by a deficiency of night temperature.

June began with a continuation of the heat of the end of May, but after the thunder storms of the 4th a cold spell set in, and light frost was experienced in many places from the 7th to the 9th. Afterwards the temperature gradually increased and continued; although electric storms were frequent in general but little rain fell, and in many places from the 4th to the 20th none. The entire precipitation was about one-third of the normal. July began warm and dry, but after the first week a considerable change for the better occurred. The temperature fell and light rains were pretty frequent to the end of the month, and in general at the end of the month reports showed a more hopeful spirit. In addition to the showers the dew was more copious. Although the rainfall was extremely small it was pretty uniform, and with none of the phenomenally small amounts of July, 1894."

TEMPERATURE. The following table gives the temperature from April to September inclusive—practically the growing season—at ten well distributed points in Ontario for the years 1894 and 1895, and also the average for the fourteen years 1882-95:

Months.		Saugeen.	Birnam.	London.	Woodstock.	Stony Creek	Toronto.	Lindsay.	Gravenhurst	Ottawa.	Rockliffe.	Province average.
		deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.
April	1895 ..	40.38	44.85	47.33	47.31	44.24	43.35	42.68	41.39	42.45	38.75	43.27
	1894 ..	41.77	44.60	47.36	44.08	45.90	44.37	44.01	43.61	45.99	41.63	44.33
	1882-95	38.81	42.51	44.01	42.41	43.43	41.21	39.65	38.35	40.23	36.59	40.72
May.....	1895 ..	54.62	58.00	60.44	56.55	58.65	55.36	57.49	56.24	57.59	53.76	56.87
	1894 ..	49.63	54.43	57.75	52.89	55.49	52.56	53.05	52.63	55.46	52.82	53.67
	1882-95	49.68	53.91	55.57	53.56	54.01	52.15	52.62	51.97	54.97	51.00	52.94
June	1895 ..	63.42	67.80	72.67	68.09	70.54	67.90	68.22	67.12	69.53	64.39	67.97
	1894 .	62.18	66.73	70.20	66.07	70.78	66.45	65.47	64.61	65.95	62.89	66.13
	1882-95	60.73	65.10	66.46	65.32	66.61	63.70	64.06	63.57	66.00	61.80	64.33
July.....	1895 ..	61.70	65.69	69.00	65.91	69.27	66.23	65.11	64.87	65.89	61.74	65.54
	1894 ..	66.30	70.18	74.41	69.08	73.32	69.10	68.08	68.16	68.30	63.57	69.05
	1882-95	63.87	67.60	68.42	67.86	70.51	67.34	66.27	66.22	68.01	63.93	67.01
August ..	1895 ..	62.11	65.80	69.25	66.47	70.11	65.09	65.09	64.09	65.16	60.19	65.34
	1894 ..	61.75	65.12	68.90	65.26	69.52	65.29	63.20	62.85	61.79	56.39	64.01
	1882-95	62.67	65.17	66.59	65.21	68.64	65.46	63.77	63.60	65.18	60.53	64.68
September	1895 ..	59.97	63.01	64.02	61.48	64.61	60.63	58.44	59.28	58.90	54.17	60.45
	1894 ..	59.35	64.15	64.67	61.79	65.57	62.25	59.85	60.31	59.65	53.37	61.10
	1882-95	57.00	60.21	60.40	59.08	61.73	59.09	56.71	56.98	57.43	52.83	58.15
Mean for six months ..	1895 ..	57.03	60.86	63.78	60.97	62.90	59.76	59.51	58.83	59.92	55.50	59.91
	1894 ..	56.83	60.87	63.88	59.86	63.43	60.00	58.94	58.69	59.52	55.11	59.72
	1882-95	55.46	59.08	60.24	58.91	60.82	58.16	57.18	56.78	58.64	54.45	57.97

The mean temperature for the six months was 59.91°, being .19° higher than that of the preceding year, and 1.94° above that of the average for the fourteen years, 1882-95. London shows the highest mean temperature for the six months, and Rockliffe the lowest, although in June and July the latter station experienced a higher temperature than Saugeen. Taking the figures of the Province by months, it will be seen that in May, June and August the temperature of the Province was higher than that in both the previous year and the average for the fourteen years; in April and September the temperature was below that of 1894, but above that of the fourteen years' average; while in July the figures failed to reach those of either 1894 or 1882-95.

PRECIPITATION. The fall of rain and snow in the winter months is given in the following table by districts for the years 1894-5 and 1893-4, together with the average for the fourteen years, 1882-95. In studying this table it should be remembered that an inch of rain is the equivalent of ten inches of snow:

Month.		West and southwest.		Northwest and north.		Centre.		East and northeast.		Province average.	
		Rain.	Snow.	Rain.	Snow.	Rain.	Snow.	Rain.	Snow.	Rain.	Snow.
		in.	in.	in	in.	in.	in.	in.	in.	in.	in.
November ..	1894 ..	0.70	15.2	0.87	16.9	0.47	6.1	1.10	7.3	0.78	11.4
	1893 ..	2.70	5.8	1.40	17.7	2.27	6.5	1.51	9.7	1.97	9.9
	1882-94	2.45	7.3	2.06	14.2	2.28	5.9	1.95	8.8	2.19	9.0
December ..	1894 ..	2.26	2.9	1.16	10.2	1.44	4.3	1.10	9.0	1.49	6.6
	1893 ..	2.52	19.2	1.39	34.0	2.66	21.4	0.84	30.1	1.85	26.2
	1882-94	1.61	13.3	1.15	21.1	1.49	11.2	1.05	14.7	1.33	15.1
January	1895 ..	0.90	26.6	0.31	40.9	1.34	28.2	0.52	29.5	0.78	31.3
	1894 ..	0.91	4.2	0.50	23.1	1.10	9.3	1.11	19.4	0.91	14.0
	1882-95	1.18	16.9	0.92	28.4	1.22	18.9	0.94	22.3	1.06	21.7
February .	1895 ..	0.13	10.0	0.09	18.9	0.09	8.0	0.03	11.3	0.08	12.0
	1894 ..	0.98	12.4	0.28	18.4	0.91	17.9	0.19	11.8	0.59	15.1
	1882-95	1.56	11.7	0.62	21.3	1.18	13.6	0.69	17.9	1.01	16.1
March	1895 ..	0.45	9.7	0.21	11.5	0.77	8.5	0.21	13.5	0.41	10.8
	1894 ..	1.21	3.9	1.16	9.5	1.24	2.5	1.00	3.1	1.15	4.8
	1882-95	1.17	9.5	0.76	13.8	1.11	9.2	0.89	13.1	0.98	11.4
Totals for five months	1895 ..	4.44	64.4	2.64	98.4	4.11	55.1	2.96	70.6	3.54	72.1
	1894 .	8.32	45.5	4.73	102.7	8.18	57.6	4.65	74.1	6.47	70.0
	1882-95	7.97	58.7	5.51	98.8	7.28	58.8	5.52	76.8	6.57	73.3

The average snowfall for the Province for the five months was 72.1, being a little more than in the previous year, but slightly less than the average for the fourteen years. The rainfall, however, was but 3.54 inches, being only slightly more than one-half that of either of the other two periods. November was characterized by a small rainfall and a comparatively large precipitation of snow, while a slightly more than normal fall of rain and an exceedingly light fall of snow marked December. January had exactly the same amount of rainfall as November, but 31.3 inches of snowfall, or about half as much again as ordinarily in that month. In February only .08 inch of rain fell, or less than one twelfth of the average for the month, while the snowfall was about three-fourths of the normal. In March there was almost an average fall of snow, but slightly less than half the average rainfall.

The rainfall during the growing season (April-September) is of more importance than that of the winter, and the following table gives the precipitation for the six months:

Months.	West and southwest.		Northwest and north.		Centre.		East and northeast.		Province average.	
	1895.	1882-95.	1895.	1882-95.	1895.	1882-95.	1895.	1882-95.	1895.	1882-95.
	in.	in.	in.	in	in.	in	in.	in.	in.	in.
April	1.63	1.79	1.30	1.41	1.77	1.61	1.27	1.37	1.49	1.55
May	2.35	3.46	2.24	2.60	2.18	3.01	2.66	2.76	2.36	2.96
June.....	1.19	3.16	1.86	2.76	1.09	3.00	1.35	2.81	1.37	2.93
July	2.04	2.40	1.66	2.51	2.28	2.34	2.21	2.84	2.02	2.52
August	2.49	2.57	3.32	2.75	2.61	2.54	2.84	2.85	2.81	2.68
September.	2.98	2.56	2.36	2.99	2.89	2.59	2.43	2.54	2.67	2.67
Totals ..	12.68	15.94	12.64	15.02	12.82	15.09	12.76	15.17	12.72	15.31

The average rainfall of the Province for the six months amounted to only 12.72 inches, being 2.57 inches less than the average for the fourteen years, 1882-95. The precipitation appears to have been fairly distributed in the four districts. The rainfall of the Province in June was only 1.37 inch, or less than one-half that of the average of the month for the fourteen years. In April, May and July the precipitation was also below the average of each of those months. In August, however, there was a slight increase in the amount of rainfall, while in September the figures for 1895 exactly agree with those for 1882-95.

SUNSHINE. The following table gives the record of sunshine recorded at five stations for the six months April to September inclusive, for the year 1894 and 1895, and also the average for the thirteen years 1883-95. The last column gives the hours of possible sunshine calculated for latitude 45°.

Months.		Woodstock.	Toronto.	Barrie.	Lindsay.	Kingston.	Province average.	Sun above horizon, lat. 45°.
		hours.	hours.	hours.	hours.	hours.	hours.	hours.
April	1895	193.2	200.1	190.7	199.5	192.1	195.1	406.4
	1894	186.2	223.6	221.7	222.2	210.9	212.9	
	1883-95	184.0	197.6	176.9	204.9	195.1	191.7	
May	1895	267.6	261.4	250.4	246.0	235.2	252.1	461.1
	1894	170.1	177.1	168.2	168.8	224.2	181.7	
	1883-95	202.3	216.8	198.2	214.1	216.4	209.6	
June	1895	296.9	285.5	281.2	280.6	287.4	246.3	465.7
	1894	265.3	262.2	226.4	235.8	233.4	244.6	
	1883-95	241.4	259.2	227.1	255.3	246.2	245.8	
July	1895	241.7	242.3	221.5	205.1	251.5	272.5	470.9
	1894	306.8	266.2	283.4	266.8	257.7	276.2	
	1883-95	274.2	283.3	259.1	275.0	269.7	272.3	
August	1895	236.7	236.5	214.8	199.6	252.5	228.0	434.5
	1894	207.2	227.7	217.5	183.4	200.8	207.3	
	1883-95	232.4	248.2	215.5	246.0	244.5	237.3	
September	1895	191.2	208.9	182.6	193.4	194.6	194.1	376.3
	1894	109.4	191.4	179.9	143.7	157.4	156.4	
	1883-95	184.4	216.4	165.0	202.8	197.1	193.1	
Totals for six months	1895	1427.3	1434.7	1341.2	1324.2	1413.3	1388.1	2614.9
	1894	1245.0	1348.2	1297.1	1220.7	1284.4	1279.1	
	1883-95	1318.7	1421.5	1241.8	1398.1	1369.0	1349.8	

Out of 2,614.9 hours of possible sunshine in the six months comprising the table, 1,388.1 were registered in 1895, being 109 hours more than in the previous year, and 38.3 more than the average for the thirteen years, 1883-95. May was a particularly bright month, while August was the only month that fell below its record for the thirteen years. Toronto, as usual, experienced the largest number of hours of sunshine and Lindsay the least.

FARM LANDS OF THE PROVINCE.

RURAL AREA ASSESSED. The table following gives the acreage assessed in townships which are municipally organized, by county groups, the total for the Province being given for all classes of land for 1894 and 1895 :

Districts.	Acres assessed.			Acres cleared.		Acres woodland.	Acres swamp, marsh or waste.	Per cent. cleared.
	Resident.	Non-resident.	Total.	1895.	1894.			
Lake Erie	2,303,434	32,654	2,336,088	1,533,381	1,512,231	707,446	95,261	65.6
Lake Huron	2,248,193	64,209	2,312,402	1,439,700	1,420,489	607,865	264,837	62.3
Georgian Bay	1,980,445	49,016	2,029,461	1,149,615	1,123,082	597,213	282,633	56.6
West Midland	3,225,662	27,916	3,253,578	2,415,403	2,388,731	532,864	305,311	74.2
Lake Ontario	3,006,182	41,852	3,048,034	2,362,356	2,357,777	415,538	270,140	77.5
St. Law. and Ottawa	5,135,737	196,795	5,332,532	2,430,732	2,413,419	2,010,549	891,251	45.6
East Midland	2,549,307	147,370	2,696,677	897,789	890,515	1,316,752	482,136	33.3
Northern Districts	1,682,935	421,608	2,104,543	198,016	186,366	1,669,192	237,335	9.4
The Province. 1895	22,131,895	981,420	23,113,315	12,426,992	.....	7,857,419	2,828,904	53.8
The Province. 1894	22,032,799	1,006,175	23,038,974	.....	12,292,610	7,859,714	2,886,650	53.4

There are 23,113,315 acres in the assessed rural area of the Province, of which 12,426,992 acres, or a percentage of 53.8, are cleared, compared with 53.4 in 1894. The total area shows an increase of 74,341 acres over the previous year, while the acreage of cleared land has increased by 134,382. The area of wood land is slightly less than in the preceding year, but there are 57,746 acres less of swamp and marsh land. There is also a continued decrease in non-resident land. The Lake Ontario group still shows the highest ratio of cleared land.

AREA IN PASTURE. The number of acres in pasture is given in the following table by county groups and for the Province for each of the five years 1891-95, and also the percentage of cleared land in pasture in 1895 :

Year.	Lake Erie.	Lake Huron.	Georgian Bay.	West Midland.	Lake Ontario.	St. Lawrence and Ottawa.	East Midland.	Northern Districts.	The Province.
	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.
1895	261,181	373,061	235,602	518,394	391,876	705,175	209,859	33,507	2,728,655
1894	247,530	369,178	233,935	519,802	388,225	711,042	200,979	32,550	2,703,241
1893	247,557	376,258	228,361	535,379	367,048	695,576	199,514	32,487	2,682,180
1892	238,565	350,067	222,766	504,588	360,243	673,231	184,389	28,191	2,562,040
1891	239,189	381,578	234,623	530,858	379,627	693,923	201,289	30,194	2,721,281
Rate per 1,000 cleared in 1895	170.3	259.1	204.9	214.6	165.9	290.1	233.8	169.2	219.6

There were 2,728,655 acres in pasture in 1895, which is more than in the case of any other year in the table. The ratio per 1,000 acres cleared is 219.6 for the Province, ranging from 165.9 in the Lake Ontario district to 290.1 in the St. Lawrence and Ottawa group.

ACREAGE UNDER CROP. The following table gives the acreage under crop for each of the five years 1891-5, and also the average for the fourteen years 1882-95.

Field crops.	1895.	1894.	1893.	1892.	1891.	1882-95.
	acres.	acres.	acres.	acres.	acres.	acres.
Fall wheat	743,199	778,992	913,954	966,522	849,956	887,938
Spring wheat	223,957	230,016	356,721	651,302	510,634	506,962
Barley	478,046	486,261	467,315	499,225	553,166	668,807
Oats	2,373,309	2,342,766	1,936,644	1,861,469	1,840,636	1,796,160
Rye	120,350	90,144	68,486	73,073	67,865	99,172
Peas	799,963	785,007	738,741	774,732	752,453	699,148
Corn.. Husking	302,929	267,348	217,294	181,463	241,086	241,167
Corn.. Fodder	149,899	111,361	95,865	91,403		
Buckwheat	135,262	145,268	133,828	125,104	107,879	87,983
Beans	72,747	59,281	48,858	33,249	41,451	34,010
Potatoes	184,647	167,253	142,601	145,703	160,218	156,764
Mangel-wurzels	34,383	27,670	21,519	22,026	22,961	21,504
Carrots	13,002	11,186	9,288	9,941	9,858	10,546
Turnips	151,806	147,657	136,604	129,627	126,075	115,366
Hay and clover	2,537,674	2,576,943	2,766,894	2,515,367	2,549,975	2,378,702
Total	8,321,173	8,227,153	8,054,612	8,080,206	7,834,213	7,704,229

The acreage of all field crops in 1895 was 8,321,173, being 94,020 more than in the preceding year. A shrinkage is observed in the areas devoted to both fall and spring wheat, barley, buckwheat, and hay and clover, while there is an increase in the acreages of the other crops, more especially in corn for both husking and fodder purposes.

The table following gives the acreage of all the crops mentioned in the foregoing table, and for the same periods, by county groups and for the Province :

Year.	Lake Erie.	Lake Huron.	Georgian Bay.	West Midland.	Lake Ontario.	St. Lawrence and Ottawa.	East Midland.	Northern Districts.	The Province.
	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.
1895	1,057,730	909,262	773,416	1,651,847	1,676,762	1,511,493	597,027	143,636	8,321,173
1894	1,047,297	873,424	758,184	1,594,356	1,687,718	1,529,255	596,254	140,665	8,227,153
1893	1,046,128	869,971	733,656	1,535,218	1,660,138	1,490,433	581,869	137,199	8,054,612
1892	1,002,829	869,630	733,539	1,542,550	1,696,482	1,503,724	593,111	138,341	8,080,206
1891	990,197	844,278	696,561	1,504,482	1,635,753	1,463,449	571,755	127,738	7,834,213
Average 1882-95	963,693	813,798	692,152	1,497,855	1,634,907	1,429,507	567,828	104,489	7,704,229

In every district excepting the Lake Ontario and the St. Lawrence and Ottawa, an increase is shown compared with the figures for the previous year. The Lake Ontario and West Midland groups have the largest areas under crop.

PROPORTIONAL AREAS UNDER CROP. The relative distribution of the various crops per 1,000 acres cleared is given in the following table, by county groups and for the Province for 1894 and 1895, together with the average for the fourteen years 1882-95 :

Districts.		Fall wheat.	Spring wheat.	Barley.	Oats.	Rye.	Peas.	Corn.	Buckwheat.	Beans.	Potatoes.	Mangel-wurzels.	Carrots.	Turnips.	Hay and clover.	Total.
Lake Erie	1895..	129.0	1.1	18.3	142.8	15.2	29.7	107.7	10.5	33.6	12.8	1.9	1.0	2.5	183.7	689.8
	1894..	136.4	1.4	18.5	142.1	8.6	35.8	98.0	12.6	29.2	12.6	1.2	.7	2.6	192.9	692.6
	'82-95.	165.3	7.6	26.2	128.9	9.0	43.8	77.8	8.9	17.9	12.0	1.1	.6	1.9	206.7	707.7
Lake Huron.	1895..	75.1	5.5	31.5	206.9	1.8	70.4	26.3	1.1	2.4	9.9	3.4	.8	12.8	183.7	631.6
	1894..	75.1	5.5	29.7	188.2	.8	70.9	20.5	.9	1.6	8.8	2.9	.7	12.2	197.1	614.9
	'82-95.	109.8	24.3	43.1	159.3	.9	68.1	12.0	1.2	.8	10.0	2.2	.8	11.1	198.2	641.8
Georgian Bay	1895..	54.2	20.0	46.1	214.8	3.0	97.1	9.3	6.3	1.2	14.5	1.1	.9	16.5	187.8	672.8
	1894..	56.8	20 0	40.7	219.2	3.9	94.6	7.5	4.7	.8	13.8	1 1	1.0	17.1	193.8	675.0
	'82-95.	74.7	61.5	49.4	170.2	2.8	83.7	3.6	2.0	.4	13.8	1.0	1.0	13.9	198.4	676.4
West Midland	1895	85.4	12.9	48.2	217.6	8.3	59.3	32.0	2.5	1.9	14.5	4.6	1.2	18.9	176.6	683.9
	1894	89.4	10.5	42.6	216.0	2.9	60.4	23.6	1.9	.7	12.3	3.7	.9	19.5	183.0	667.4
	'82-95.	110.1	31.1	55.0	167.3	2.7	62.1	16.0	1.3	.6	12.1	3.1	1.0	16.7	186.5	665.6
Lake Ontari	1895..	60.1	26.1	62.9	173.7	16.5	94.4	28.2	22.1	2.5	17.5	3.1	.9	18.6	183.2	709.8
	1894..	66.1	24.9	70.4	178.2	14.1	92.8	22.1	26.5	2.4	15.3	2.8	.8	17.3	182.0	715.7
	'82-95.	70.1	64.9	110.8	137.6	13.5	75.0	16.2	12.7	1.2	14.3	2.4	1.1	14.4	184.4	718.6
St. Lawrence and Ottawa	1895..	3.3	26.8	18.9	190.2	7.5	34.4	30.8	14.6	1.6	16.1	1.6	1.1	2.7	272.2	621.8
	1894..	4.5	33.2	22.3	191.5	7.9	31.7	27.6	14.4	1.3	15.7	1.2	.9	2.9	278.5	633.6
	'82-95.	6.3	49.1	36.0	178.9	12.8	40.0	14.7	13.5	1.5	17.0	.9	.8	2.1	261.9	635.5
East Midland	1895..	19.8	33.1	42.7	195.3	14.8	82.9	21.9	17.5	2.1	15.3	2.9	1.5	12.7	202.5	665.0
	1894..	23.8	32.1	51.2	204.1	13.5	75.1	19.4	19.0	1.3	14.2	2.5	1.3	11.3	200.8	669.6
	'82-95.	30.2	81.1	83.7	156.5	19.7	68.3	12.3	11.3	.9	14.9	1.9	1.1	8.5	198.5	688.9
Northern Districts	1895..	3.4	19.5	12.1	182.1	3.0	85.8	4.0	4.8	.6	24.6	.8	1.8	14.6	368.3	725.4
	1894..	4.5	27.8	17.1	184.5	1.8	94.0	4.0	4.1	.5	23.1	.8	1.6	14.6	376.4	754.8
	'82-95.	4.4	57.4	15.7	171.5	6.3	79.6	3.2	5.1	.7	24.7	.7	1.5	17.0	370.8	758.6
The Province	1895..	59.8	18.0	38 5	191.0	9.7	64.4	36.4	10.9	5.8	14.9	2.8	1.0	12.2	204.2	669.6
	1894..	63.4	18.7	39.6	190.6	7.3	63.9	30.8	11.8	4.8	13.6	2.3	.9	12 0	209.6	669.3
	'82-95.	78.0	44.5	58.7	157.7	8.7	61.4	21.2	7.7	3.0	13.8	1.9	.9	10.1	208.8	676.4

The figures for the Province show that out of every 1,000 acres cleared 669.6 acres are given to the fourteen crops comprising the table, which is a slight increase over the ratio in 1894, although the actual increase is confined to the Lake Huron and West Midland districts.

FALL WHEAT.

The fall wheat growing in November, 1894, was thus referred to in the crop bulletin issued in that month : "The sowing began September 1st and was finished by October 1st, the larger portion being put in the ground from September 5th to 15th. The ground was in fine condition, the only drawback being that there was too little moisture. At the time of reporting the general statement was that it never was in better condition. Little or no injury of any kind was reported. The varieties are too numerous to be referred to here."

Reports sent in by correspondents in May were to the effect that notwithstanding the drouth the crop entered the winter in a rather promising state, and but for the thaw in January which flooded low places and led to the formation of ice, the outlook would

have been excellent when the snow left. In the western half of the Province, while many splendid fields were reported, loss by ice was common, ranging from odd patches in the low-lying fields in several of the great fall wheat counties, to a thinning out of nearly fifty per cent. in portions of the county of Norfolk. The frosts of May 12th to 21st did further injury to fall wheat in western Ontario, but the crop suffered less comparatively than the spring grains. Here and there a little barley had been sown on the bare spots, but not much fall wheat was plowed up on account of grass being sown with the wheat. In the eastern part of the Province very little loss was reported from winter killing, but comparatively little fall wheat is raised there. Not much injury from insects was reported. There was a single reference to the Hessian fly from Kent, and scattering mention of wire-worm in Lambton and Bruce, but the crop had been remarkably free from insect pests. As to the comparative condition of fall wheat on clay and the lighter soils, considerable divergence of opinion was expressed. Many references were made in different sections of the province to the effect that drainage and tillage have a great deal to do with the success of this crop.

August reports regarding fall wheat were not unanimous, although on the whole they may be considered as favorable. The crop was cut earlier than usual, but notwithstanding the rapid ripening the berry was frequently described as plump and of good quality. Owing to the drouth the straw was short, except in a few favored localities. The crop was harvested in good condition, and farmers generally found little reason to murmur at the return, as there was not much rust, and only the slightest injury from the Hessian fly or other insect enemies, frost and drouth doing the main injury. In York a few fields were plowed up and resown with oats. The yield per acre varied from four to forty-five bushels.

Threshing fully confirmed the August reports of fall wheat. The yield was nineteen bushels per acre, which is a little under the average. The quality was in general, very good. A few correspondents reported the grain shrunken, but on the whole it was quite up to the average in appearance and in weight.

The acreage and yield of fall wheat are given in the following table by county groups and for the Province for 1894 and 1895, together with the average of the Province for the fourteen years 1882-95 :

Districts.	1895.			1894.			Yearly average for the fourteen years 1882-95.		
	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.
Lake Erie	197,846	3,322,813	16.8	206,236	3,976,394	19.3	225,089	4,257,772	18.9
Lake Huron	108,191	2,276,993	21.0	106,725	2,282,983	21.4	139,286	2,807,640	20.2
Georgian Bay	62,294	1,602,744	25.7	63,814	1,424,738	22.3	76,472	1,600,697	20.9
West Midland	206,384	3,782,195	18.3	213,475	4,718,807	22.1	247,798	5,123,549	20.7
Lake Ontario	142,016	2,637,335	18.6	155,941	3,462,245	22.2	159,536	3,259,793	20.4
St. Lawrence and Ottawa	8,065	177,306	22.0	10,785	214,217	19.9	14,262	262,866	18.4
East Midland	17,748	342,385	19.3	21,174	418,474	19.8	24,893	482,605	19.4
Northern Districts	655	13,511	20.6	842	14,248	16.9	602	12,041	20.0
Totals	743,199	14,155,282	19.0	778,992	16,512,106	21.2	887,938	17,806,963	20.1

The 743,199 acres of fall wheat grown in the Province in 1895 are 35,793 less than were reported in the previous year, and the falling off occurred in every district excepting the Lake Huron. Although the Georgian Bay district gave the generous yield of 25.7 bushels per acre, the average yield per acre for the Province is but nineteen bushels, which is 2.2 bushels less than in 1894, and 1.1 bushel below the average yield of the fourteen years, 1882-95. The decrease in both area and yield per acre makes the total yield 2,356,824 bushels less than that of the preceding year.

THE NEW FALL WHEAT. The November bulletin contained the following: "In 1883 the area of fall wheat stood at 1,091,467, it dropped to 864,740 acres in the following year. Then it increased gradually to 897,743 acres in 1887; then it decreased gradually to 720,102 acres in 1890. In 1892 it was up to 966,522 acres. Since then it has dropped year by year to 743,199 acres in 1895. The movement, then, has been one of expansion and contraction. The reports this fall indicate an increased acreage sown to fall wheat. A few report a decrease; many report the same as sown a year ago; but the majority report an increase of from ten to thirty per cent. The crop was put in under most favorable conditions. Some sowing took place as early as August 25th; some as late as October 1st; but the bulk of the crop was sown about September 15th. On the whole, October was not very favorable to the crop. The early growth was retarded, and the general condition was not the most favorable at the beginning of November, although much desired rains and more favorable weather were just then promising an improvement. The report, then, may be summed up thus: increased acreage; fair condition. The following reasons are given for the increased acreage: Shortage of straw this year; decreasing production of spring wheat; very favorable condition of weather and of soil in September; hope for better wheat prices."

SPRING WHEAT.

The acreage sown was less than usual, and some fields got touched by frost in May.

This crop was ripening unevenly as correspondents wrote for the August bulletin, and only a small portion had been cut. The yield per acre was very light, the drouth and the grasshopper making a strong combination against it. The straw was very short. Little injury had been done by the midge or other such assailants.

The November bulletin said that the crop was on the decline in the Province in acreage, in yield, and, many think, in quality. In both west and east the quality was hardly up to the average, many reporting it light in weight, shrunken and discolored. The yield in 1890 was 7,683,905 bushels; in 1895 it was 3,472,543 bushels.

The acreage and yield of spring wheat are given in the following table by county groups and for the Province:

Districts.	1895.			1894.			Yearly average for the fourteen years 1882-95.		
	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.
Lake Erie	1,686	24,763	14.7	2,137	27,758	13.0	10,301	147,596	14.3
Lake Huron	7,868	125,351	15.9	7,811	117,135	15.0	30,855	439,271	14.2
Georgian Bay	22,974	377,307	16.4	22,427	356,566	15.9	62,980	922,016	14.6
West Midland	31,198	542,961	17.4	25,027	443,349	17.7	69,864	1,062,160	15.2
Lake Ontario	61,612	871,004	14.1	58,689	811,698	13.8	147,849	2,275,945	15.4
St. Lawrence and Ottawa	65,046	1,089,758	16.8	80,160	1,121,869	14.0	110,349	1,802,467	16.3
East Midland	29,707	378,788	12.8	28,591	417,895	14.6	66,860	937,137	14.0
Northern Districts	3,866	62,611	16.2	5,174	71,584	13.8	7,904	138,182	17.5
Totals	223,957	3,472,543	15.5	230,016	3,367,854	14.6	506,962	7,724,774	15.2

The decreases in acreage in the Lake Erie and St. Lawrence and Ottawa groups and in the Northern Districts was not offset by the increases in area in the other districts, the result being that the total area of spring wheat in the Province in 1895 is but 223,957 acres, or 7,059 acres less than in the preceding year. The decrease in 1895, however, is light compared with that of some of the more recent years, as may be judged by comparing the present acreage with the average for the fourteen years. The average yield of the Province in 1895 is 15.5 bushels per acre, being .9 bushels more than in 1894 and .3 bushels more than the average for 1882-95. The best yield was in the West Midland district and the poorest in the East Midland counties.

BARLEY.

This crop, like nearly all the spring grains, was got into the ground under favorable conditions, but in every district it was more or less injured by frost. In many quarters the fields looked yellow from this cause, as correspondents wrote in the last week of May, but the expectation prevailed that the crop would recover.

As in the case of spring wheat, the fields of barley have ripened unevenly. While thin on the ground and short in the straw, the grain was, as a rule, plump and well up to weight, although the catchy weather at harvesting caused much discoloration. The yield was variable, in some sections being but half an average, and at other points going away over the usual return, but it was thought that the average would be about the same as last year. Six-rowed ripened about a week earlier than the two-rowed variety.

November reports on barley were varied, both as to quantity and quality, more so than in the case of the other grains. The quantity on the whole was up to the average, but the grain was reported from most sections as being plump but discolored. There appeared to be very little bright colored barley. The straw was short and light in yield.

The following table gives the acreage and yield of barley by county groups and for the Province:

Districts.	1895.			1894.			Yearly average for the fourteen years, 1882-95.		
	Acres.	Bushels.	Bushels per acre.	Acres.	Bushels.	Bushels per acre.	Acres.	Bushels.	Bushels per acre.
Lake Erie	28,013	786,534	28.1	27,957	641,790	23.0	35,637	867,191	24.3
Lake Huron	45,384	1,271,588	28.0	42,135	1,084,853	25.7	54,678	1,443,895	26.4
Georgian Bay	53,012	1,536,357	29.0	45,679	1,116,049	24.4	50,566	1,297,627	25.7
West Midland	116,374	3,120,568	26.8	101,861	2,554,599	25.1	123,773	3,437,420	27.8
Lake Ontario	148,453	3,309,489	22.3	165,944	3,358,043	20.2	252,066	6,380,167	25.3
St. Lawrence and Ottawa	46,062	1,144,473	24.8	53,925	1,154,284	21.4	80,964	1,937,211	23.9
East Midland	38,362	865,507	22.6	45,571	1,007,421	22.1	68,964	1,632,607	23.7
Northern Districts	2,386	55,991	23.5	3,189	63,365	19.9	2,159	49,941	23.1
Totals	478,046	12,090,507	25.3	486,261	10,980,404	22.6	668,807	17,046,059	25.5

Although there has been an increase in the area of barley in the four western districts, it has not been large enough to overcome the decrease in the four eastern groups, and the result is that the acreage of the Province is only 478,046, being 8,215 less than in 1894, and 190,760 below the average for 1882-95. The yield per acre while 2.7 bushels more than in 1894, is slightly below the average for the fourteen years. Over one-half of the barley of the Province is raised in the Lake Ontario and West Midland counties.

OATS.

While many correspondents spoke highly of the prospects of this crop in May, it would seem as if oats have suffered more from frost than in many years. From every county group reports came of the young plant being nipped by the frost, but, as in the case of barley, it was thought that favorable weather would redeem the crop. Like the other spring grains, it suffered most heavily on mucky land.

August returns stated that there was a wide range in the yield of oats reported, there being some very poor fields, while others were mentioned as giving as high as sixty-two and seventy bushels per acre. Frost, drouth and grasshoppers did much injury, and the crop also ripened unevenly. The straw was unusually short; in fact, in some places in the Lake Erie district the reaper had to be dispensed with, and the crop cut with the mower. A little rust was reported, and also some smut, but not enough to be serious. The grain was described as being heavy and of good quality generally.

The reports forwarded for the November bulletin led to the following summary: This has been the big crop of the year, it has exceeded the August estimate. Increased acreage and the high average yield of 35.7 bushels per acre have given a total of 84,697,566 bushels for 1895. There are a few poor records, but the following are fair samples of reports: "Good, but short in straw;" "Best for some time;" "A capital crop and good quality;" "Best crop in a decade;" "The heaviest yield all round ever grown." The total yield of the Province is 9,688,024 bushels larger than the big record of 1891.

The table following presents the acreage and yield by county groups and for the Province:

Districts.	1895.			1894.			Yearly average for the fourteen years, 1882-95.		
	Acres.	Bushels.	Bushels per acre.	Acres.	Bushels.	Bushels per acre.	Acres.	Bushels.	Bushels per acre.
Lake Erie	218,934	8,481,803	38.7	214,818	6,538,690	30.4	175,512	6,076,486	34.6
Lake Huron	297,882	11,573,632	38.9	267,272	9,052,022	33.9	202,027	7,150,748	35.4
Georgian Bay	246,933	8,862,445	35.9	246,197	7,972,815	32.4	174,115	5,835,759	33.5
West Midland	525,580	20,292,298	38.6	515,901	16,469,019	31.9	376,448	14,030,110	37.3
Lake Ontario	410,256	14,170,951	34.5	420,356	12,153,774	28.9	312,951	11,033,030	35.3
St. Lawrence & Ottawa	462,344	14,904,138	32.2	462,089	12,024,850	26.0	402,477	12,768,694	31.7
East Midland	175,318	5,289,938	30.2	181,745	5,036,720	27.7	129,008	3,977,359	30.8
Northern Districts	36,063	1,122,361	31.1	34,388	924,626	26.8	23,622	722,006	30.6
Totals	2,373,309	84,697,566	35.7	2,342,766	70,172,516	30.0	1,796,160	61,594,192	34.3

The area devoted to oats in 1895 reached 2,373,309 acres, which is 30,543 acres more than in 1894, and the Lake Ontario and East Midland districts were the only groups falling below their respective figures for the previous year. The splendid average yield of 35.7 bushels per acre raised the total yield of the Province to over fourteen and a half million of bushels more than that of the year before. The Lake Huron district averaged 38.9 bushels per acre, the Lake Erie and West Midland counties following closely after.

RYE.

Correspondents writing in May reported comparatively little winter rye grown, but that what there was looked well. The crop is confined largely to the eastern part of the Province.

August returns were to the effect that rye had turned out to be a good crop, and that more of it was grown than usual.

The reports made in November confirmed those of August concerning rye, but said that comparatively little of the crop had been grown for grain. It had been cut green to supplement the poor meadows. The new crop was making good growth as correspondents wrote.

The following table gives the acreage and yield by county groups and for the Province :

Districts.	1895.			1894.			Yearly average for the fourteen years, 1882-95.		
	Acres.	Bushels.	Bushels per acre.	Acres.	Bushels.	Bushels per acre.	Acres.	Bushels.	Bushels per acre.
Lake Erie	23,221	354,327	15.3	13,030	195,662	15.0	12,269	189,035	15.4
Lake Huron	2,555	48,180	18.9	1,199	23,551	19.6	1,126	20,085	17.8
Georgian Bay	3,409	57,780	16.9	4,371	66,229	15.2	2,888	49,955	17.3
West Midland	20,006	349,894	17.5	7,020	126,351	18.0	6,144	103,816	16.9
Lake Ontario	39,010	584,515	15.0	33,207	480,515	14.5	30,769	451,479	14.7
St. Lawrence and Ottawa	18,220	305,584	16.8	18,964	302,864	16.0	28,823	506,960	17.6
East Midland	13,326	188,212	14.1	12,024	186,007	15.5	16,289	251,155	15.4
Northern Districts	603	11,625	19.3	329	5,427	16.5	864	16,523	19.1
Totals	120,350	1,900,117	15.8	90,144	1,386,606	15.4	99,172	1,589,008	16.0

The number of acres in rye in 1895 is given as 120,350, which is fully one-third more than in the previous year, and the increased area is shared in by every district excepting the Georgian Bay and the St. Lawrence and Ottawa. The yield per acre was almost an average one. The figures of total yield of this grain are merely nominal and above the actual, as a considerable portion of the crop was cut before maturing and used as green feed, on account of scant pastures owing to the drouth.

PEAS.

This crop, where sown early, was caught by the frost and considerably injured Many farmers had delayed sowing in order to escape the bug, and it was thought that late peas would get a favorable start.

Correspondents in August claimed that this crop had withstood the dry weather better than any other, excepting perhaps corn. Some reported the straw as rather short, while others declared that it was abundant and would be the salvation of live stock as winter fodder. Showers at the time of writing were delaying harvesting and prolonging growth, and some mildew was reported. The bug was also reported, but not to so great an extent as last year. Pods were said to be well filled with good sized peas.

The November had the following regarding peas : This crop may be summed up as being fair. In some western sections it suffered much from drouth. The " bugs," while numerous, do not appear to have been any more destructive than usual.

The average and yield of peas is given in the following table by county groups and for the Province :

Districts.	1895.			1894.			Yearly average for the fourteen years 1882-95.		
	Acres.	Bushels.	Bushels per acre.	Acres.	Bushels.	Bushels per acre.	Acres.	Bushels.	Bushels per acre.
Lake Erie	45,592	778,997	17.1	54,167	736,015	13.6	59,649	1,054,955	17.7
Lake Huron	101,366	2,300,300	22.7	100,684	1,980,791	19.7	86,304	1,899,207	22.0
Georgian Bay	111,605	2,375,417	21.3	106,199	2,135,544	20.1	85,613	1,833,094	21.4
West Midland	143,256	3,190,961	22 3	144,212	2,605,706	18.1	139,351	2,939,704	21.0
Lake Ontario	223,102	3,897,448	17.5	218,749	3,632,341	16.6	170,591	3,333,071	19.5
St. Lawrence and Ottawa	83,606	1,501,302	18.0	76,637	1,341,846	17.5	89,891	1,722,322	19.2
East Midland	74,454	1,149,851	15.4	66,845	1,237,970	18.5	56,289	1,064,739	18.9
Northern Districts	16,982	373,827	22.0	17,514	352,675	20.1	10,960	248,690	22.7
Totals	799,963	15,568,103	19.5	785,007	14,022,888	17.9	699,148	14,095,782	20.2

There is an increase in the acreage of peas in five out of the eight districts, and the total area of the Province is now 799,963 or 14,956 acres more than in the preceding year. The average yield per acre for the year is 19.5 bushels, which, while 2.4 bushels more than in 1894, is .7 bushel less than the average for the fourteen years. The best average yield was in the Lake Huron district, and the poorest in the West Midland group.

CORN.

When the first reports regarding crops came in about the 28th of May it was too early to say much regarding corn. That which was planted early had been badly cut up by frost, but the bulk of the crop had yet to come up, and the conditions were considered as favorable to a good start.

The August bulletin said: "It would seem as if corn is destined to have a very large acreage in the Province of Ontario. The area is steadily increasing, and although this season drouth at the time of planting told against the success of the crop, the present condition is full of encouragement. From every district favorable reports came regarding corn, although in several localities where planted on sod the grub did injury, and in some cases necessitated a second planting."

The November bulletin contained the following: "The area of corn has more than doubled since 1890. This year it was 552,828 acres, in 1890 it was 223,836 acres. The experience of the present year has evidently increased its popularity. Its growth during the latter part of summer and early fall was rapid. In the dry sections of the west its value as a supplement to pasture was most marked. One correspondent says: 'In the year 1895 it was corn that saved the farmers of Ontario.' Corn growing for husking yielded as high as 120 bushels of ears per acre in some southwestern townships. Taking area into consideration, the corn crop has proved about the most important crop grown this year."

The following table gives the acreage and yield of corn for husking, and for the silo and fodder, by county groups and for the Province:

Districts.		For husking.			For silo and fodder.			Total area.		
		Acres.	Bushels (in the ear.)	Bushels per acre.	Acres.	Tons (green.)	Tons per acre.	1895 acres.	1894 acres.	Average 1882-95 acres.
Lake Erie	1895	149,921	13,423,606	89.5	15,219	137,201	9.02	165,140	148,164	106,006
	1894	137,505	8,424,975	61.3	10,659	69,767	6.55			
Lake Huron	1895	23,914	1,975,079	82.6	13,954	168,274	12.06	37,868	29,144	15,195
	1894	19,625	1,248,741	63.6	9,519	76,929	8.08			
Georgian Bay	1895	3,317	216,924	65.4	7,361	95,603	12.99	10,678	8,461	3,648
	1894	3,471	191,854	55.3	4,990	51,213	10.26			
West Midland	1895	44,591	3,288,624	76.0	32,711	377,525	11.54	77,302	56,327	35,967
	1894	33,745	2,251,832	66.7	22,582	219,340	9.71			
Lake Ontario	1895	33,392	2,323,804	69.6	33,145	382,720	11.55	66,537	52,073	36,803
	1894	30,416	1,558,880	51.3	21,657	212,918	9.83			
St. Lawrence and Ottawa	1895	37,961	2,904,821	76.5	36,918	406,945	13.16	74,879	66,509	32,967
	1894	32,671	2,109,914	64.6	33,838	351,594	10.39			
East Midland	1895	9,362	562,287	60.1	10,276	114,797	11.17	19,638	17,294	10,131
	1894	9,401	466,756	49.6	7,893	66,323	8.40			
Northern Districts	1895	471	24,754	52.6	315	2,589	8 22	786	737	450
	1894	514	22,420	43.6	223	1,681	7.54			
Totals	1895	302,929	24,819,899	81.9	149,899	1,775,654	11.85	452,828	378,709	241.167
	1894	267,348	16,275,352	60.9	111,361	1,049,765	9.43			

The total area of corn has extended to 452,828 acres, which is 74,119 acres more than in 1894, and nearly double the average for the fourteen years 1882-95. This large increase is pretty evenly shared (taking the Province over), by the two classes of corn comprising the table. The increase in the acreage of corn for fodder and the silo is participated in by every group, and but three of the districts (and in these the crop is a minor one) fail to equal their respective figures of the previous year for husking corn. The average yield of 31.9 bushels in the ear per acre is a magnificent one, and the average yield of 11.85 tons of fodder corn per acre is also satisfactory.

REMARKS OF CORRESPONDENTS.

From the May Returns.

Zone, Kent: My neighbor tells me that he can fat a steer at one-half the cost since he built a silo.

Downie, Perth: Silage is being extensively used, and many silos are being built this summer. The farmers here depend largely upon co-operative butter-making and hogs.

Grantham, Lincoln: Farmers will have to change to growing more corn for ensilage, for winter use, so as to keep more stock, and have the manure for the farm. I have had a silo for two years, and intend to put up another this season. I can say that it has been a success, because it gives more feed (and cheaper) for winter use than any other method I have tried in the thirty years I have been farming.

Kingston, Frontenac: A large number of farmers in this locality grow large quantities of fodder corn and roots, which allows them to winter their stock much better and cheaper than formerly. Quite a number have built silos, and more are preparing to build this season, and that means that we will be able to winter more stock and keep them in better condition.

Finch, Stormont: A good many of our leading farmers are going into corn raising and silos. The method of feeding is in the morning hay, at noon the same and in the evening forty pounds of ensilage to each milking cow.

From the November Returns.

Pelee Island, Essex: There is one silo here. The owner grows dent corn, planted in drills, and cut when beginning to glaze. The results have been good.

Tilbury, E., Kent: Silos are becoming more common. The large white dent corn is chiefly used. It is generally cut when the corn is getting hard.

Malahide, Elgin: There are some five or six silos in this township. Some grow the large ensilage corn, and others the common yellow. It is cut and put in the silo after it has reached the glazing stage.

Stamford, Welland: Ensilage is becoming more general every year. There have been several silos put up this summer.

Hullett, Huron: Corn sown for fodder and ensilage was the best crop we have had for many years. It was ten days past the glazing stage when cut, and had more ears on corn grown for the silo than I ever saw in this locality. Growing corn takes the place of the summer fallow, and when properly wrought, and the land kept properly clean, is the best preparation I know of for preparing the land for grain crops, and for seeding with clover and grasses.

Stanley, Huron: There is only one silo in the neighborhood, and this year it is not in use.

St. Vincent, Grey: There have been no silos built lately, but nearly every farmer is growing more corn for feed.

Sarawak, Grey: Some new silos were put up this year. Crompton's Early was nearly all ripe when put into the silo, and Mammoth Southern Sweet was in the milk stage.

Biddulph, Middlesex: Several silos have been erected in this locality. I have built one. It is the first year for the silo here.

Caradoc, Middlesex: Two silos were built in this locality during the past two years, and have turned out well. Flint corn is the best for the silo.

Williams E., Middlesex: A few silos were built last summer.

Zorra E., Oxford: There are some twenty-five or thirty silos in this township, but not many are being being built. People prefer roots. Corn is the only silo crop here.

Onondaga, Brant: There is only one silo in this locality. There is no trouble to raise corn along the river to fill it, but on clay it might be different.

Elma, Perth: The silo is a plant of slow growth, so to speak. Corn is generally sown.

Wallace, Perth: I know of only one silo in this locality, and it is not being made use of this season.

Puslinch, Wellington: More silos have been built this season than ever before.

Waterloo, Waterloo: Several new silos have been put in this year, but people seem very slow in adopting the principle.

Waterloo, Waterloo: The silo is growing in favor. Quite a number have been put up this season, and if they are a success there will be a great boom next summer.

Grantham, Lincoln: One other besides myself has a silo. Corn only is grown for the silo. It pays well.

Esquesing, Halton: The silo is getting more popular every season. Corn is always used for silage, and was a good crop this year. Mammoth Southern, mixed with some of the earlier varieties, planted in rows about three feet apart, to admit of cultivation, is the common way in this locality.

Nassagaweya, Halton: There are a few silos in this locality. Corn is used, being put into the silo when the ear is in the glazed state.

Markham, York: A few have put in silos this year. Corn is the only ensilage crop grown. The corn crop was simply immense.

Pickering, Ontario: Ensilage has not generally been adopted here. A few silos have been put up this season. Illinois Dent and Mammoth Southern Sweet are the varieties of corn grown here for the silo.

Manvers, Durham: I have heard of only one silo being built in this township, but quite a quantity of corn is grown for feeding purposes.

Percy, Northumberland: A good many silos have been built this season. Very little of the corn was cut before frost came, which injured it very much.

Yonge, Leeds: Ensilage has been adopted to quite an extent. Corn is the principal crop and turned out very well.

Caledonia, Prescott: A few silos have been built, and have been filled with corn this year. The corn ripened about the middle of September.

Plantagenet S., Prescott: I have had two silos for the past three years, and I find the ensilage pretty dear feed. In fact they are only good on a small farm to enable the farmer to keep more cows on less land, but where the farm is large and can grow clover it will give better returns.

Drummond, Lanark: Some silos were built this season. There are a number in this township. Corn is the only crop grown for the silo. It was slightly frozen.

Eldon, Victoria: A few silos have been built in our township this season.

Laxton, Victoria: Growing corn for fodder is certainly gaining in this section. It will help the dairy industry a great deal, as being the cheapest fodder for winter feed. It will keep dairy and young stock up and in better condition at even less cost than the old style of feeding around the straw stack.

Watt, Muskoka: I am, so far as I know, the only one who indulges in a silo in this locality. Sunflower goes with my corn into the silo.

BUCKWHEAT.

November reports were to the effect that buckwheat suffered more than usual from early fall frosts. Early sown buckwheat turned out first-class, but late sown was more or less damaged.

The acreage and yield is given in the following table by county groups and for the Province:

Districts.	1895.			1894.			Yearly average for the fourteen years 1882-95.		
	Acres.	Bushels.	Bushels per acre.	Acres.	Bushels.	Bushels per acre.	Acres.	Bushels.	Bushels per acre.
Lake Erie	16,157	329,078	20.4	19,084	304,791	16.0	12,168	223,384	18.4
Lake Huron	1,549	31,325	20.2	1,302	22,782	17.5	1,470	26,687	18.1
Georgian Bay	7,187	165,702	23.1	5,316	99,478	18.7	2,012	38,681	19.2
West Midland	6,009	121,693	20.3	4,535	88,735	19.6	2,901	53,863	18.6
Lake Ontario	52,122	991,091	19.0	62,467	1,107,160	17.7	28,947	568,684	19.6
St. Lawrence and Ottawa	35,571	819,743	23.0	34,858	618,915	17.6	30,449	633,105	20.8
East Midland	15,709	311,331	19.8	16,950	283,860	16.7	9,336	180,956	19.4
Northern Districts	958	21,876	22.8	756	13,644	18.0	700	15,223	21.7
Totals	135,262	2,791,749	20.6	145,268	2,534,335	17.4	87,983	1,740,483	19.8

The area of buckwheat has increased in five districts, but has fallen off so largely in the other three groups that the total acreage is only 135,262, which is 10,002 less than in 1894. The crop is grown most largely in the Lake Ontario and the St. Lawrence and Ottawa districts. The average yield per acre is 20.6 bushels, which is well over the average for the fourteen years.

BEANS.

Early beans in gardens were badly hurt by frost. According to August returns field beans promised a fair crop although a good deal of the seed failed to germinate, owing to the drouth at the time of planting. It was then expected that the crop would be well above the average.

The expectations of August were fulfilled. November reports were to the effect that the Kent bean crop was a good one, and in other parts of the Province the yield was expected to be well up to the average.

The acreage and yield of beans is given in the following table by county groups and for the Province :

Districts.	1895.			1894.			Yearly average for the fourteen years 1882-95.		
	Acres.	Bushels.	Bushels per acre.	Acres.	Bushels.	Bushels per acre.	Acres.	Bushels.	Bushels per acre.
Lake Erie	51,549	1,086,769	21 1	44,214	579,196	13.1	24,325	406,914	16.7
Lake Huron	3,517	70,669	20.1	2,285	36,221	15.9	1,000	17,735	17.7
Georgian Bay	1,436	29,545	20.6	938	14,200	15.1	410	7,329	17.9
West Midland	4,491	94,887	21.1	1,717	31,512	18.4	1,445	25,034	17.3
Lake Ontario	5,873	103,490	17.6	5,646	94,306	16.7	2,656	47,102	17.7
St. Lawrence and Ottawa	3,904	75,799	19.4	3,185	53,977	16.9	3,334	68,495	20.5
East Midland	1,850	31,222	16.9	1,203	16,372	13.6	741	12,461	16.8
Northern Districts	127	1,798	14.2	93	1,730	18.6	99	1,778	18.0
Totals	72,747	1,494,179	20.5	59,281	827,514	14.0	34,010	586,848	17.3

An increase has occurred in every district in the acreage of beans, which has raised the area from 59,281 acres in 1894 to 72,747 acres in 1895. The greater part of the bean crop is grown in the Lake Erie counties, where the large yield of 21.1 bushels per acre was this year realized. The average yield per acre for the Province is 20.5 bushels, which is over three bushels more than the average for the fourteen years 1882-95.

FIELD ROOTS.

The root crops had a poor start owing to drouth, but later in the season they picked up, and on the whole were the most successful class of crops grown in 1895. These crops were housed under favorable conditions.

POTATOES. Early planted potatoes were cut off by the frosts of the latter part of May. Those planted later had a much more favorable start, and notwithstanding the drouth made rapid growth. August reports led to the conclusion that if vigorous stalk and profusion of blossom and leaf count for anything, there ought to be an abundant yield of potatoes. Some correspondents, however, thought that there was danger of too much growth above ground. Dry rot was reported by one or two correspondents, but with the exception of the presence of the bug and the grasshopper no great injury to the crop has so far been reported.

The November bulletin said : "It is many years since so large a return of potatoes was made. Most favorable reports as to both yield and quality come from all over the Province. Practically no mention is made of rot, and the tubers have been well stored. The low price prevailing is the only drawback to a big record."

The following table gives the acreage and yield by county groups and for the Province :

Districts.	1895.			1894.			Yearly average for the fourteen years 1882-95.		
	Acres.	Bushels.	Bushels per acre.	Acres.	Bushels.	Bushels per acre.	Acres.	Bushels.	Bushels per acre.
Lake Erie	19,667	2,622,479	133	19,102	1,415,558	74	16,314	1,668,016	102
Lake Huron	14,193	2,225,644	157	12,493	1,204,512	96	12,688	1,458,960	115
Georgian Bay	16,652	2,966,499	178	15,513	1,567,959	101	14,083	1,793,593	127
West Midland	34,961	5,831,515	167	29,294	3,243,581	111	27,147	3,276,353	121
Lake Ontario	41,421	6,333,359	153	36,110	3,388,833	94	32,499	3,675,239	113
St Lawrence and Ottawa	39,093	6,416,440	164	37,784	4,549,209	120	38,347	4,701,449	123
East Midland	13,783	2,182,007	158	12,636	1,240,731	98	12,283	1,503,381	122
Northern Districts	4,877	812,950	167	4,315	542,747	126	3,403	506,090	149
Totals	184,647	29,390,884	159	167,253	17,163,130	103	156,764	18,582,991	119

There were 17,395 acres more in potatoes in 1895 than in the previous year, bringing the total area up to 184,647 acres. Every district increased its acreage of this crop. The yield of the Province in 1895 is greatly in excess of the average, being forty bushels per acre above the average of the fourteen years, and 56 bushels per acre more than the poor yield of 1894. This high average yield and enlarged area has resulted in the total yield of the Province being over twelve millions of bushels greater than that of last year.

MANGEL-WURZELS. Mangels suffered from the drouth at sowing, but in August promised much better than turnips. At that date favorable weather for roots was prevailing, and it was hoped that the crop would be redeemed. November returns described mangels as rather small in size, but with a yield per acre above the average.

The acreage and yield are given by county groups and for the Province in the following table :

Districts.	1895.			1894.			Yearly average for the fourteen years 1882-95.		
	Acres.	Bushels.	Bushels per acre.	Acres.	Bushels.	Bushels per acre.	Acres.	Bushels.	Bushels per acre.
Lake Erie	2,912	1,341,982	461	1,821	767,042	421	1,559	643,831	413
Lake Huron	4,854	2,462,474	507	4,120	1,886,394	458	2,820	1,287,933	457
Georgian Bay	1,304	565,765	434	1,191	481,167	404	1,026	430,998	420
West Midland	11,140	5,479,101	492	8,788	3,818,206	434	6,994	3,207,264	459
Lake Ontario	7,389	3,284,928	445	6,535	2,629,221	402	5,451	2,407,655	442
St. Lawrence and Ottawa	4,032	1,658,173	411	2,862	1,044,897	365	2,019	771,165	382
East Midland	2,600	1,122,446	432	2,207	851,150	386	1,542	637,962	414
Northern Districts	152	46,633	307	146	54,050	370	93	28,032	301
Totals	34,383	15,961,502	464	27,670	11,532,127	417	21,504	9,414,830	438

Mangel-wurzels are growing in favor in every district, and the total acreage has increased from 27,670 in 1894 to 34,383 in 1895. About one-third of the mangels raised this year were grown in the West Midland district. The average yield per acre for the Province is 464 bushels, which is 47 bushels more than in the preceding year, and 28 bushels more than the average for the fourteen years. The largest average yield per acre was in the Lake Huron group, and the smallest in the Northern Districts.

CARROTS. Notwithstanding the poor start owing to the drouth, carrots presented a fair appearance when correspondents wrote in August. Rains were then falling, and things were generally promising for the crop. In November most correspondents spoke favorably of carrots, both as to yield and quality. Other reports regarding the crop would lead one to wonder where the good general yield came from.

The following table presents the acreage and yield by county groups and for the Province:

Districts.	1895.			1894.			Yearly average for the fourteen years 1882-95.		
	Acres.	Bushels.	Bushels per acre.	Acres.	Bushels.	Bushels per acre.	Acres.	Bushels.	Bushels per acre.
Lake Erie	1,461	516,702	354	1,032	347,166	336	809	247,673	306
Lake Huron	1,199	427,287	356	1,051	377,833	359	1,012	358,376	354
Georgian Bay	1,016	341,833	336	1,120	388,724	347	1,071	387,385	362
West Midland	2,879	1,105,082	384	2,254	752,999	334	2,211	822,227	372
Lake Ontario	2,197	748,836	341	2,014	683,754	340	2,545	941,951	370
St. Lawrence and Ottawa	2,581	915,339	355	2,290	706,708	309	1,794	573,891	320
East Midland	1,306	420,619	322	1,121	372,326	332	901	303,793	337
Northern Districts	363	105,675	291	304	86,570	285	203	56,832	280
Totals	13,002	4,581,373	352	11,186	3,716,140	332	10,546	3,692,128	350

An increase in the area of this crop has taken place in every district excepting the Georgian Bay, a total of 13,002 acres of carrots having been grown in 1895, compared with 11,186 in 1894. The average yield per acre for the year is 352 bushels, which is two bushels more than the average for the fourteen years. The largest acreage of carrots is found in the West Midland group, while last year the St. Lawrence and Ottawa district led in this respect.

TURNIPS. There was a rather poor prospect for turnips in the earlier stages of the crop. The drouth at the time of seeding prevented much of the seed from germinating. In fact, it was declared by some correspondents that some of the seed did not come up until the rains of the early days of August. From that time on favorable weather for roots prevailed, and notwithstanding the attacks of the fly and the grasshopper there was an average yield of turnips. As in the case of mangels, the roots are rather small in size. The acreage and yield are given in the following table by county groups:

Districts.	1895.			1894.			Yearly average for the fourteen years 1882-95.		
	Acres.	Bushels.	Bushels per acre.	Acres.	Bushels.	Bushels per acre.	Acres.	Bushels.	Bushels per acre.
Lake Erie	3,815	1,472,761	386	3,918	1,447,707	369	2,591	936,338	361
Lake Huron	18,428	7,287,972	395	17,200	7,067,427	411	14,068	5,774,595	410
Georgian Bay	19,022	8,188,504	430	19,231	8,692,223	452	14,208	5,983,610	421
West Midland	45,749	19,264,704	421	46,713	19,636,079	420	37,664	16,192,797	430
Lake Ontario	44,004	18,738,595	426	40,841	17,526,107	429	32,785	14,196,216	433
St. Lawrence and Ottawa	6,499	2,779,464	428	6,960	2,532,097	364	4,713	1,724,111	366
East Midland	11,409	4,740,832	416	10,080	3,887,690	386	6,990	2,673,571	382
Northern Districts	2,880	1,023,870	356	2,714	905,157	334	2,347	770,261	328
The Province	151,806	63,496,702	418	147,657	61,694,487	418	115,366	48,251,499	418

As in the case of the other root crops there has been an increase in the area of turnips, although four of the eight districts have failed to equal their respective acreages of the preceding year. An interesting feature of the table is the fact that the average yield per acre (418 bushels) is the same for 1895, 1894 and 1882-95.

HAY AND CLOVER.

Timothy and clover fields suffered severely in 1894 through drouth. Very little damage was done in the winter, and the appearance in spring was, on the whole, quite promising. The growth of early May was very rapid, although there was a lack of moisture. The frosts injured clover very much; from all parts of the Province it was reported as being cut back or killed. Lucerne especially suffered. The injury to clover was greater in the west than in the east. Timothy was checked in its growth. Reports sent in towards the close of May stated that pasture grasses had suffered in most parts of Ontario from lack of rain, and also from the two weeks of cold weather in May.

The August bulletin thus summarized the reports of correspondents: "The only thing in favor of the hay crop is the fact that it had splendid weather for harvesting, and was saved in the best possible condition. The yields range from a quarter of a ton to two and a half tons per acre, but the majority of returns are under one ton to the acre, and the average for the season is but .73 tons per acre, which means a half crop. Frost, drouth and the grasshopper kept the fields light. Old meadows, almost without exception, were complete failures, and many are being plowed up. Timothy did not head well, but clover, though short, is as a rule full of seed. It is many a year since the mower ran over such light fields of timothy and clover as were found in some of the counties in western Ontario. In the counties along the St. Lawrence and Ottawa, however, good reports have been received concerning the hay crop, while in the East Midland district some old meadows were not cut at all."

The November returns led to the conclusion that clover was about the poorest crop of the year. Red clover turned out badly, but alsike, on the whole, was very good. Winter killing, May frosts and drouth were all held responsible.

The following table presents the acreage and yield of hay by county groups and for the Province:

Districts.	1895.			1894.			Yearly average for the fourteen years 1882-95.		
	Acres.	Tons.	Tons per acre.	Acres.	Tons.	Tons per acre.	Acres.	Tons.	Tons per acre.
Lake Erie	281,737	195,769	.69	291,617	424,437	1.46	281,464	400,266	1.42
Lake Huron	264,498	129,544	.49	280,003	350,372	1.25	251,269	348,095	1.35
Georgian Bay	215,894	117,816	.55	217,721	271,807	1.25	203,060	260,728	1.28
West Midland	426,518	256,648	.60	437,232	614,425	1.41	419,648	631,156	1.50
Lake Ontario	432,771	268,707	.62	429,146	643,611	1.50	419,459	582,967	1.39
St. Lawrence and Ottawa	661,691	717,704	1.08	672,247	965,013	1.44	589,118	709,755	1.36
East Midland	181,817	109,845	.60	178,813	211,677	1.18	163,601	194,483	1.19
Northern Districts	72,938	53,881	.74	70,164	93,858	1.34	51,083	63,098	1.24
Totals	2,537,674	1,849,914	.73	2,576,943	3,575,200	1.39	2,378,702	3,271,488	1.38

The area of hay and clover in 1895 is less by 39,269 acres than in the previous year, although the Lake Ontario, East Midland and Northern Districts show a slight increase in acreage. The average yield per acre for the Province is only .73 ton per acre, which is only about half an average crop, and makes the total yield of the Province but 1,849,914 tons, compared with 3,575,200 tons in 1894. In the Lake Huron district the average yield per acre was only .49 ton, and in the Georgian Bay counties .55 ton.

COMPARATIVE YIELD OF FIELD CROPS.

AGGREGATE YIELD OF FIELD CROPS. The following table gives the total yield of staple field crops for each of the past five years, and also the average for the fourteen years, 1882-95:

Field crops.	1895.	1894.	1893.	1892.	1891.	1882-95.
	bushels.	bushels.	bushels.	bushels.	bushels.	bushels.
Fall wheat	14,155,282	16,512,106	17,545,248	20,492,497	21,872,488	17,806,963
Spring wheat	3,472,543	3,367,854	4,186,063	8,290,395	10,711,538	7,724,774
Barley	12,090,507	10,980,404	9,806,088	12,274,318	16,141,904	17,046,059
Oats	84,697,566	70,172,516	58,584,529	64,758,053	75,009,542	61,594,192
Rye	1,900,117	1,386,606	994,771	1,132,504	1,134,630	1,589,008
Peas	15,568,103	14,022,888	14,168,955	14,494,430	18,323,459	14,095,782
Buckwheat	2,791,749	2,534,335	2,380,456	2,521,214	2,608,142	1,740,483
Beans	1,494,179	827,514	664,310	535,931	769,600	586,848
Potatoes	29,390,884	17,163,130	12,911,212	12,289,817	24,055,886	18,582,991
Mangel-wurzels	15,961,502	11,532,127	8,582,568	10,350,474	11,779,448	9,414,830
Carrots	4,581,373	3,716,140	2,971,450	3,827,361	3,814,016	3,692,128
Turnips	63,496,702	61,694,487	56,975,355	63,541,641	68,853,452	48,251,499
Corn for husking	24,819,899	16,275,352	14,072,961	11,229,498	.....	*16,599,425
	tons.	tons.	tons.	tons.	tons.	tons.
Corn for fodder	1,775,654	1,049,765	1,049,524	948,907	.....	*1,205,963
Hay and clover	1,849,914	3,575,200	4,963,557	4,384,838	2,392,798	3,271,488

In considering the figures comprising the table it is well to remember that both acreage and yield go to make up the results given. Fall wheat and hay and clover are the only crops failing to equal their own yields for the year immediately preceding, while fall wheat, spring wheat, barley and hay and clover do not show as large yields as their respective averages for the fourteen years.

AVERAGE YIELDS PER ACRE. The following table gives the average yield per acre for each of the leading field crops by county groups for 1895 and for the Province for both 1894 and 1895, as well as the average for the fourteen years, 1882-95, excepting corn, which has been separated into two classes for only four years:

Field crops.	Lake Erie	Lake Huron.	Georgian Bay.	West Midland.	Lake Ontario.	St. Lawrence and Ottawa.	East Midland.	Northern Districts.	The Province.		
									1895.	1894.	1882-95.
	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.	bush.
Fall wheat	16.8	21.0	25.7	18.3	18.6	22.0	19.3	20.6	19.0	21.2	20.1
Spring wheat	14.7	15.9	16.4	17.4	14.1	16.8	12.8	16 2	15.5	14.6	15.2
Barley	28.1	28.0	29.0	26.8	22.3	24.8	22.6	23.5	25.3	22.6	25.5
Oats	38.7	38.9	35.9	38.6	34.5	32.2	30.2	31.1	35.7	30.0	34.3
Rye	15.3	18.9	16.9	17.5	15.0	16.8	14.1	19.3	15.8	15.4	16.0
Peas	17.1	22.7	21.3	22.3	17.5	18.0	15.4	22.0	19.5	17.9	20.2
Buckwheat	20.4	20.2	23.1	20.3	19.0	23.0	19.8	22.8	20.6	17.4	19.8
Beans	21.1	20.1	20.6	21.1	17 6	19.4	16.9	14.2	20 5	14.0	17.3
Potatoes	133	157	178	167	153	164	158	167	159	103	119
Mangel-wurzels	461	507	434	492	445	411	432	307	464	417	438
Carrots	354	356	336	384	341	355	322	291	352	332	350
Turnips	386	395	430	421	426	428	416	356	418	418	418
Corn for husking	89.5	82.6	65.4	76 0	69.6	76.5	60.1	52.6	81.9	60.9	*68.5
	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.
Corn for fodder (green)	9.02	12.06	12.99	11.54	11.55	13.46	11.17	8.22	11.85	9.43	*10 75
Hay and clover	.69	.49	.55	.60	.62	1.08	.60	.74	.73	1.39	1.38

* These figures are the averages for four years 1892-95.

Only four crops, namely, fall wheat, rye, peas, and hay and clover fail to equal their respective average yields for the fourteen years. The highest average yields are found in the following groups: Georgian Bay, fall wheat, barley, buckwheat, potatoes and turnips; Lake Huron, oats, peas and mangel-wurzels; West Midland, spring wheat and carrots; St. Lawrence and Ottawa, corn for husking and hay and clover; Lake Erie, corn for husking; Northern Districts, rye. Beans reach their highest average yield in both the Lake Erie and West Midland districts.

Ratios of Aggregate Crops. The ratio of total yield of each crop is given in the following table by county groups and for the Province, 100 representing the average of the Province for the fourteen years, 1882-95:

Districts.	Fall wheat.	Spring wheat.	Barley.	Oats.	Rye.	Peas.	Buckwheat.	Beans.	Potatoes.	Mangel-wurzels.	Carrots.	Turnips.	Hay and clover.
Lake Erie	78	17	91	140	187	74	147	267	157	208	209	157	49
Lake Huron	81	29	88	162	240	121	118	398	153	191	119	126	38
Georgian Bay	100	41	118	152	116	130	428	403	165	131	88	137	45
West Midland	74	51	91	145	337	109	226	379	178	171	134	119	41
Lake Ontario	81	38	52	128	129	117	174	220	172	136	79	132	46
St. Lawrence and Ottawa	67	60	59	117	60	87	129	111	136	215	159	161	90
East Midland	71	40	53	133	75	108	172	251	145	176	138	177	56
Northern Districts	112	45	112	155	70	150	144	101	161	166	186	133	85
The Province	79	45	71	138	120	110	160	255	158	170	124	132	57

In this table also both acreage and yield influence the results. Beans, mangel-wurzels, buckwheat, potatoes, oats, turnips, carrots, rye and peas, in the order named, have ratios above 100, but fall wheat, barley, hay and clover and spring wheat fail to reach the standard, the last named crop marking only forty-five for the Province, while it dwindled to seventeen in the Lake Erie district.

Ratios of Yield per Acre. The table following compares the average yield per acre in 1894 with that of the fourteen years 1882-95, the latter being represented by 100:

Districts.	Fall wheat.	Spring wheat.	Barley.	Oats.	Rye.	Peas.	Buckwheat.	Beans.	Potatoes.	Mangel-wurzels.	Carrots.	Turnips.	Hay and clover.
Lake Erie	89	103	116	112	99	97	111	126	130	112	116	107	49
Lake Huron	104	112	106	110	106	103	112	114	137	111	101	96	36
Georgian Bay	123	112	113	107	98	100	120	115	140	103	93	102	43
West Midland	88	114	96	103	104	106	109	122	138	107	103	93	40
Lake Ontario	91	92	88	98	102	90	97	99	135	101	92	98	45
St. Lawrence and Ottawa	120	103	104	102	95	94	111	95	133	108	111	117	79
East Midland	99	91	95	98	92	81	102	101	130	104	96	109	50
Northern Districts	103	93	102	102	101	97	105	79	112	102	104	109	60
The Province	95	102	99	104	99	97	104	118	134	106	101	100	53

Hay and clover fall as low as 53, fall wheat shows 95 and peas 97, barley and rye 99, and turnips reach exactly 100, while the remaining crops go over that figure, potatoes touching as high as 134.

FRUIT AND FRUIT TREES.

Although the season opened later than usual, the warm weather of the latter part of April rushed growth along at so rapid a rate that observers writing on the 1st of May could find room for a difference of opinion as to the exact stage of vegetation compared with previous seasons.

In the table following, the area in orchard and garden (as taken by the municipal assessors in rural municipalities only), is given by county groups and for the Province, together with the ratio per 1,000 cleared in 1895 :

Year.	Lake Erie.	Lake Huron.	Georgian Bay.	West Midland.	Lake Ontario.	St. Lawrence and Ottawa.	East Midland.	Northern Districts.	The Province.
	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres	acres.
1895	42,201	24,084	13,455	38,444	59,724	13,619	9,877	1,210	202,614
1894	41,727	23,401	13,001	38,731	58,123	12,481	10,440	1,064	198,968
1893	42,114	22,433	13,278	39,293	58,715	13,156	8,962	1,109	199,060
1892	42,412	22,815	12,351	38,598	56,275	11,686	9,416	545	194,098
1891	40,802	22,167	11,858	37,704	53,267	12,011	9,130	893	187,832
Rate per 1,000 acres cleared in 1895	27.5	16.7	11.7	15.9	25.3	5.6	11.0	6.1	16.3

The rural area in orchard and garden now amounts to 202,614 acres, there being an increase of 3,646 acres over the figures for 1894, although the East and West Midland groups show a slight decrease The ratio in orchard and garden per 1,000 acres cleared is 16 3 for the Province. The Lake Erie and Lake Ontario groups, comprising the famous fruit districts of the Province, show a ratio of 27.5 and 25 3 respectively.

The following information regarding the orchard and vineyard was contained in the June bulletin : "In the Lake Erie Counties grapes and strawberries have been much injured, except on Pelee Island, where the prospects are reported as very good. Orchards and vineyards near the lakes have suffered less than others. Cherries have been rather severely injured, pears and peaches not so much ; apples promise a good crop. Most damage was done on May 21st. In the Niagara district the effects varied with the location and surrounding conditions, protected or sheltered lands suffering very much less than exposed. Grapes, cherries, small fruits, plums, peaches, pears and apples were affected in the order named—grapes most, apples least. The reports from Lake Huron, Georgian Bay and West Midland counties are more unanimous and decided as to the ill effects, apples having suffered more than elsewhere. Near Lake Simcoe less damage is reported. From Toronto east along the lake the injury was limited. In the Bay of Quinte district the grapes and strawberries were affected. In the St. Lawrence and East Midland districts apples are fair and promising. On the whole the grape crop is reported a failure except from Pelee and a few favored places in the southwest and Niagara districts. Small fruits, peaches, plums and pears, will be limited in quantity. Cherries are likely to be very short. With the exception of the Huron tract, apples promise a fair yield, especially in the case of winter varieties. Some fruit trees may yet make up for the part of the loss. There will probably be a fair amount of fruit."

The August bulletin said : "The Bureau has never received more discouraging reports concerning fruit. Apples have been a great failure. The bulk of correspondents report none at all, or a dozen or two on a tree. A number hazard the opinion that a half bushel or possibly a bushel might be the average, while occasional correspondents have a generous yield to report. The best returns come from districts near the lakes. Plums are a poor crop, and so are peaches. Cherries did not do as well as usual, but they were not so badly troubled with black knot as in former years. Grapes, which were

almost entirely cut off by the May frosts, put forth a second bud, and about half a crop is expected. Raspberries did well in the Niagara and Hamilton sections, but strawberries suffered from frost and drouth. There was a fair amount of wild fruits in the northern and eastern portions of the Province."

The returns sent in in November were to the following effect: "Frost and drouth have been trying to orchard, garden and vineyard. In the inland portion of western Ontario apples have been a failure, and other fruits have been only slightly better, owing to the severe frosts of May. Near the shores of Lakes Erie and Ontario, however, and in the counties along the St. Lawrence, apples and many other fruits were abundant. Insects had done hardly as much injury as usual, and hopes were expressed that these enemies of the orchard might suffer more than the trees from the experience of the year. While here and there grape vines had been killed out by the May frosts, in most cases a new growth of wood was made, and prospects were not bad for the immediate future.

IMPORTS OF FRUIT AT THE PORT OF TORONTO.

The following table gives the import of fruit by boat at the port of Toronto in the years 1894 and 1895:

	1894.	1895.
Barrels	4,172	3,214
Boxes	11,858	2,161
Baskets	234,760	77,976

As the fruit imports by boat at Toronto come principally from Niagara and Grimsby, this falling off points conclusively to a large decrease in the fruit production in 1895 of the Niagara peninsula as compared with the year 1894.

There was a falling off in every class of package in 1895, more especially in boxes and baskets, and the total import of fruit by water route was only about one-third of that of the preceding year. It would be interesting to know to what extent the shipments by rail were affected. In the absence of definite figures it is fair to assume that there was also a falling off in the imports of fruit by train. The above table suggests a very poor yield of fruit compared with the previous year.

REMARKS OF CORRESPONDENTS.

From the August Returns.

Gosfield, N., Essex: It is many years since we had so little fruit. Near the lakes and the Detroit river the frost did not do so much damage, and some fruit growers there will have an abundant crop to dispose of.

Howard, Kent: Don't mention fruit in Kent, except where sheltered by the Lake Erie fogs. Perhaps for two miles along the lake there is some fruit, but inland there is none whatever. I have ten acres under fruit and have not seen a single apple.

Raleigh, Kent: Along the lake there will be a very heavy and extra fine crop of grapes.

Sherbrooke, Haldimand: Grapes started again after the frost, and are producing a fair crop.

Vespra, Simcoe: On seventy apple trees in my orchard I will get about one barrel.

Minto, Wellington: Nearly all bloom on apple trees was killed in May, but some late varieties are going to have fair crops. The apples will be clean of scab, but rather wormy.

Grimsby, N., Lincoln: Apples are clean and smooth, but there is more codling moth than anticipated. The early brood did little damage, but the late brood has been very active.

Trafalgar, Halton: I notice quite a difference where the trees were sprayed for codling moth. Spraying has been a decided success this year.

Ameliasburg, Prince Edward: Apples are remarkably free from spot or scab this year, but they have had their usual insect enemies.

Elmsley, Lanark: Fruit trees and vines look well. We may thank the Bureau and College for it. I sprayed my trees and vines as instructed and am well paid.

Laxton, Victoria: Wild raspberries are a good crop, but there are no huckleberries.

Morrison, Muskoka: No huckleberries, few raspberries, thimbleberries good, no cranberries.

FROM THE NOVEMBER RETURNS.

Pelee Island, Essex: Many peach trees were broken down with the heavy winds and loads of fruit on them before ripe, and a few late peaches were hurt with frost.

Howard, Kent: In an orchard of over 150 trees there were only three apples, which were closely watched by two little boys lest some other boys might appropriate them. Along the shore of Lake Erie there is an abundant crop of apples, peaches, grapes, etc. This state of things is caused by the fog or mist from the lake covering two miles or so inland, and shielding the blossoms from the May frosts.

Raleigh, Kent: Several thousand peach trees were planted during the spring.

Raleigh, Kent: There was a considerable loss in apples from drouth and codling moth—perhaps forty per cent. Trees sprayed from three to five times show little if any difference so far as wormy fruit goes. Thousands of barrels of apples have been shipped, but only of medium quality. First class peaches, grapes and berries have been shipped to all parts of Ontario and to Manitoba and Quebec. Our quinces were shipped to Cleveland and Detroit.

Canboro', Welland: Some of our farmers are going more largely into fruit raising, both in the vineyard and in the orchard.

Bayham, Elgin: Farmers should try the following experiment: put a coat of straw around your fruit trees before the frost goes out in the spring, and remove it when the frost is out, and you will not fail to get a crop of fruit. I tried it last spring and harvested ten barrels from one tree. It is best adapted to early varieties of fruit.

Stanley, Huron: In some localities there are no apples at all. Along the shore of Lake Huron was the only section having a surplus. The only reason given is that along the lake the frost has been less severe.

Tuckersmith, Huron: The supply of fruit is already exhausted, and we have to depend upon importations for home use.

Bentinck, Grey: Fruit trees are in very poor condition. They never got over the shake they got by the frost in the spring, and I think a good many will die.

Grimsby, S., Lincoln: Apple and pear trees are in good condition. Grape vines were damaged to a very great extent by the heavy May frosts. Many of the vines were cut back near to the ground, and new canes reared. The supply was not sufficient for local demand, excepting apples, of which there is a slight surplus.

Nelson, Halton: There is a great giving up of agriculture for horticulture. Thousands upon thousands of fruit trees are being planted. The orchards receive attention first, and the usual farming operations are a secondary matter with many.

Marysburg N., Prince Edward: The apple crop was large. Several thousand barrels have been exported from this township. The quality was good, free from spots or stings, but in some cases small.

Clarence, Russell: There has been considerable loss by borers, tent caterpillars, blight and frost. In some orchards summer apples were badly injured by spring frosts. Storms also occasioned considerable loss to apple trees where not sheltered in the direction from which the wind came.

FARM SUPPLIES IN THE SPRING.

The June bulletin contained the following: "It would seem as if farmers are acting more independently of each other in the matter of what they raise and what they keep in store. Certainly there is a variety of opinion as to the supply of grain and cattle now on hand. There appears to be plenty of hay in most localities, although in the more eastern part of the Province most of the surplus hay was exported, and there is very little to spare in the northern districts. Oats are rather scarcer than usual, although most of our correspondents report ample for local requirements. There is a wide difference of opinion regarding the quantity of wheat in barns. One farmer is reported as holding 4,000 bushels, waiting for the grain to command a dollar a bushel, and another correspondent declares that a dollar a bushel would bring out a surprisingly large amount of wheat; but the general tenor of the reports leads to the opinion that farmers have less wheat in store than for several years past. Immense quantities of this and other grains have been fed to cattle and hogs. Fat cattle are not so plentiful as usual, although in some localities a number of prime beasts were being finished for the market. Store cattle also appear to be scarcer than in previous years, although several correspondents speak of there being a fair number of young cattle for turning off in the fall. Dairying appears to be more popular than beef raising at present, but a considerable number of dry cows were being offered to butchers during the latter part of the winter."

THRESHING AND MARKETING.

The bulk of correspondents, writing on November 8th, reported threshing as completed or well advanced, while a few, more particularly in the East Midland district, stated that there was still considerable to be done. Reports did not agree as to the progress of marketing. Several correspondents reported half the oats and wheat to be sold. There appeared, however, to be a tendency to hold wheat and other grains for an advance in price, and a number of correspondents asserted that sales had been made only where there was a pressure for cash. Low prices were leading farmers to feed more grain to live stock, and it was thought that a large quantity of barley and peas would be disposed of in that way. For this reason it was hard to estimate what proportion of the grain crops would be left in the farmers' hands for sale later in the season.

FALL PLOWING.

Reports varied concerning progress in the line of fall plowing. The dry weather made the sod difficult to plow, but plowing on stubble was about completed as correspondents wrote early in November. Favorable weather was prevailing as correspondents wrote, and it was expected that a larger area than usual would be turned under before the season closed.

FARM IMPROVEMENTS.

The November bulletin contained the following: "Farmers appear to be giving more attention to the appearance of their buildings and surroundings. Bank barns are much in favor, and many old barns are being raised so as to have good stone stables built under them. The old zig zag rail fence is rapidly being replaced by wire and board fences. Hedges also appear to be growing in popularity. A considerable amount of tile draining has been done in Western Ontario. Most of the work has been done by the farmers themselves. Tile machines do not seem to be in favor."

EXTRACTS FROM RETURNS OF CORRESPONDENTS.

Special Crops.

Colchester S., Essex: We have a climate here which I think is favorable to the growing of lucerne, and several are trying the experiment of growing it, although the season has been unfavorable to getting a start. The high price of the seed keeps many from buying it. If lucerne is one half as good as represented it would be a boon to farmers in this country. I have sown five acres and have a very good stand, but cannot count much on it for a crop as yet.

Gosfield N., Essex: I operate a small factory for the manufacture of syrup from sorghum. No one here tries to make sugar, although properly defecated juice will often make a syrup that will granulate without any effort. I would think there must have been from 15,000 to 20,000 gallons of syrup made in the county of Essex this year. I made up several patches that went from 100 to 150 gallons per acre. I think Essex and Kent could supply the rest of the Province with a purer and better article of syrup than is generally purchased from the large sugar houses.

Rochester, Essex: Nearly all the farmers in this locality have raised a little sorgheum which turned out well this year, and has made a good quality of syrup.

Pelee Island, Essex: Sugar beets and tobacco have been tried quite extensively, and I believe with very satisfactory results. Farmers are quitting sorghum on account of the cheapness of sugar. We have only one boat to carry passengers and freight, as the produce is not yet large enough to create much opposition.

Harwich, Kent: Sorghum is very generally raised for home use, there being several factories for pressing and evaporating it within easy distance around here. I think people have made a great mistake in cutting their bush down as they have, as this, in my opinion, has a great deal to do with our increasing drouths. When there was a considerable quantity of bush the lands held water, and there was a greater amount of water in the air and a greater attraction to rainfall.

Yarmouth, Elgin: A large area of rape was sown on wheat stubble. It did well, as it was very favorable weather for it at the time it was sown. Millet was sown to help out the short hay crop. It did not get a very good growth on account of the dry weather. Corn has been an extra crop, and a large acreage has been planted. I have a field that turned out 188 bushels of ears per acre.

Walsingham, N., Norfolk: Sorghum is grown in some localities, but not to the extent it was a few years ago.

Culross, Bruce: A flax mill was erected in Teeswater this year, and a considerable area was sown to flax, which appears to have done well in most cases. If the venture proves a success a large area will be sown next year.

Sydenham, Grey: Growing timothy seed has got to be quite in favor in parts of this township during the last few years, but this year it is nearly a failure, and where there were large quantities shipped there will hardly be enough for home consumption.

Vespra, Simcoe: Usually a good deal of maple sugar and syrup is made in this township, some makers having as many as 1,200 trees tapped. This season has been a poor one, as there has not been more than one-half the usual run of sap.

Zorra E., Oxford: Flax is raised here quite extensively in some localities where the land is suitable. It is a favorable crop for newly drained swamp lands, seeming to bring the soil into a firm condition sooner than any other crop. The land is usually rented to the owner of the flax mills for the crop, the owner plowing and fitting the land, and the lessee sowing and harvesting it. Returns of $12 and $15, and as high as $20 per acre, are quite common on lands that would hardly bring any other crop. However, flax suffered greatly from spring frosts this year.

Luther, W., Wellington: Flax was a good crop. Farmers grow from a half to seven or eight acres of this crop. It is generally pulled by flax "bees" and sold at once to the mills, bringing in a little much-needed money in summer.

Nichol, Wellington: A large quantity of flax was sown in the spring. On account of spring frosts and drouth the crop was very variable, yielding from one to three tons per acre.

Peel, Wellington: There was a very large quantity of flax sown in this section, and the bulk of it was well up above ground at the date of the great frost. There was not a vestige of it left; it has all been burned off, leaving the land like a summer fallow.

Caistor, Lincoln: Lucerne has been tried a little with good results on high, well-drained land; is especially well adapted to withstand the dry seasons; makes excellent hay when cut green; should be cut as soon as the crop is half out in flower. It is sure to produce a good second cutting, no matter how dry the season. Rape has been sown to a limited extent. We find it profitable as a catch crop sown with oats in spring, or in corn just before running through the last time with cultivator.

Athol, Prince Edward: Tomatoes are grown here for canning. Two large factories at Picton take the produce of several hundred acres. Farmers grow from two to four acres; yield about four hundred bushels per acre at 25 cents a bushel.

Sophiasburg, Prince Edward: Very few hop yards worked in hops this year; there is a large acreage where not a pole has been set up. Grain crops have been put in in place of hops, the poles are stacked and the roots left in the ground. The farmers who have hop yards say that prices are too low to pay working expenses.

Storrington, Frontenac: I sowed a field of lucerne last year, and this season it was the best paying crop I had on the farm. I cut three crops off of it; the drouth did not affect it a bit. I have been sowing black barley for three or four years, and I find it a splendid grain for feed; ground with oats it makes fine feed.

Dalhousie, Lanark: Sugar making did not last long. It was late in starting. None was made before the first of April. It was finished by the 20th of the same month, and did not run regularly in that time. There was from one-third to one-half less made this year than usual.

Watt and Monck, Muskoka: Some years ago I had an impression that the growing of sunflowers brought the ladybug. The last two years' experience has strengthened this impression. In 1893 on a certain piece of land I had a crop of potatoes; in 1894 the same land was in corn, and I did not have any sunflowers that year. The Colorado beetle was plentiful, and self-sown potatoes among the corn were eaten down to the bare stalk. In 1895 the same piece of ground carried sunflowers; the ladybugs were plentiful, and a few self-sown potatoes still left in the piece of ground were practically uninjured. Do you hear of any other such experience? I am inclined to plant my potatoes with sunflowers, two drills alternately.

St. Joseph, Algoma: Flax continues to be grown, but for the seed only. Corn is much more largely planted, as it forms a very convenient feed in the early winter. Steady improvement is being made—the most noticeable is in better buildings and fences.

The Value of Government Reports.

Cayuga S., Haldimand: Farmers are getting out of the old ruts and are employing many new methods, much of which has been accomplished by means of the various reports issued by the Ontario Department of Agriculture. If the Government could place a copy in the hand of every farmer even better results could be gained. I have received the reports for several years and have been benefited by them greatly, as also some of my friends who do not receive them, to whom I give mine after I have read them.

Sombra, Lambton: The Farmers' Institute is attracting increased patronage. The literature is doing good in many ways. The lectures set people thinking and talking about something besides their neighbors and politics.

Storrington, Frontenac: If farmers would attend the farmers' institutes meetings, listen to the speakers which the Government so kindly sends us, and follow their teachings, it would give them a better idea of how to make farming successful. Those who attend these meetings regularly are the men who are at the top of the profession. Another help would be to send the boys to the O. A. College.

Plantagenet S., Prescott: The Farmers' Institute report and other literature received by farmers ought to make some impression even on a more benighted community than our farmers.

Horton, Renfrew: I have been reading the annual reports of the Dairymen and Creameries' Associations, which are chuck full of information; also the Poultry and Pet Stock report.

Elmsley, Lanark: Allow me to express my thanks for the zeal and energy that you and your associates put forth towards the welfare of the farmers—I might say for the community at large—as what benefits the farmer is felt by all classes. I think the knowledge I have got direct and indirect is worth, at the least, one thousand dollars. One of your students has been judge on stock here for two years at our fair and has given good satisfaction. God speed you and yours.

Farmers and Agricultural Statistics.

Harwich, Kent: I have heard farmers argue that it was against the farmers' interests to supply the Bureau of Industries with information relating to the farming business. They thought it gave grain dealers and drovers a chance to regulate the markets to suit themselves. I think that this is a mistake.

[Our correspondent takes a correct view of the case. It does not seem to be generally understood that the large dealers procured through their local agents and other sources, for their own use, regular reports on the promise and yield of crops, not for Ontario only but for every other grain-growing country, thereby enabling them when possible to forestall the markets. The Bureau's reports are intended to supply the same information only more fully and accurately to the farmers themselves, so that, being posted on supply and demand, the prices of crops may not be left under the control of dealers. The refusal of farmers to supply the Bureau of Industries with this information will not leave buyers a whit less informed on crops than they always are.]

GENERAL REMARKS.

From the May Returns.

Colchester S., Essex: There has been no water in the ditches this spring. Wells are going dry which could never be pumped out.

Mersea, Essex: The principal change in agricultural methods appears to be growing less wheat and more rye, mostly for early pasture. More are giving their attention to dairying, especially to cheese. Two years ago there were two cheese factories operated in Essex, while this season there will be ten.

Raleigh, Kent: I think it will soon be time for the Minister of Agriculture to take stringent measures with township councils to enforce the Noxious Weeds Act. It is a dead letter here. A larger amount of tile draining than usual is going on this spring.

Bertie, Welland: The Government of Ontario ought to legislate in some way to benefit our roads, which are a drawback to better and more successful results to farmers.

Sombra, Lambton: Tile drainage is increasing gradually and does well. Our Agricultural Society has passed a resolution that no prize money will be paid for unregistered bulls, boars and rams. It ought to be a statutory law.

Ashfield, Huron: Some are getting over the practice of feeding straw to stock all winter, and most of the improvement in this and in other important respects is due to Government bulletins and reports.

Goderich, Huron: I never saw such a killing frost. I passed a bush yesterday and nearly all the beech trees and young hemlocks looked as if a fire had been running through. Rhubarb was cut down to the ground, and even the Canada thistles were blackened in places.

Elderslie, Bruce: Western corn and the silo are occupying a good deal of space in the farmer's attention at present, with more or less success. Poultry, too, are coming more into favor, especially with the farmer's wife, and deservedly so.

Keppel, Grey: I advocate every man taking charge of his own stock, and thus having the road cleared of the same, especially from the middle of June till October 1st. Then if the roads were fenced up, and there should be a little grass, it could be cut. The rich put their stock on the road as well as the poor, and although this causes much annoyance, no one likes to interfere. Every man should take charge of his stock, and only keep what he can feed.

Vespra, Simcoe: Many flocks of sheep are badly infected with ticks that they cannot thrive. I examined a flock a few days ago, and they were so terribly infested that they were in great misery and in very poor condition, and the young lambs were also covered. This is a matter most farmers are lamentably careless about. The appointment of one good dose of sweet pickle would entirely clear them, and at a very trifling cost. Lecturers at institutes, who speak on the subject of sheep husbandry, should emphasize this matter more than they do. There is more loss in this direction than most people are aware of. Many farmers are feeding a lot of corn instead of growing mutton and wool.

Ekfrid, Middlesex: The only change in farm culture is that we are going into more grass and less grain, thereby requiring less farm help.

Oxford, E., Oxford : I think farmers try to work too much land for the amount of farm help they can get and pay for. I am satisfied that some of the men in this neighborhood who farm from 50 to 100 acres realize much better from the capital invested than others who are working larger farms.

Easthope N., Perth : Many practised winter dairying at home this season, and made a good article (thanks to some extent to the travelling dairy), but it had the effect of making an over-supply, and I cannot remember when the market was so low. Even the wonder-working, market-making twenty cents a pound for winter creamery, made sure no matter what it sold for, did not relieve the home market or create a foreign one.

Peel, Wellington : There was a very large quantity of flax sown in this section, and the bulk of it was well above ground at the date of the great frost. There was not a vestige of it left ; it has all been burned off, leaving the land like a summer fallow.

Waterloo, Waterloo : I have noticed a good many farms where the people years ago could pull out all the wild mustard in a day or more, but now it is too late to eradicate the weed in that simple way. Instead of sowing oats on such land, they should sow summer rye, and make a summer fallow every year. Plow in the fall and work in the spring. Then sow fall wheat, followed by turnips. Then sow summer rye again, and so clean the land.

Grimsby S., Lincoln : We want the assistance of the Government to get better roads through the utilizing of convict labor. They can be kept in the country as cheaply as in their present quarters. This would not come in conflict with the manufacturers.

Beverly, Wentworth : Hundreds of car loads of turnips were shipped from our railway station last fall and winter. The average price was about ten cents a bushel. But it is only those who live near a railway station who can take advantage of this market, as it does not pay to haul them a long distance.

Flamboro', Wentworth : Allowing cattle or horses to run on and feed off the grass lands very close to the ground in the fall or early winter is hard on pasture land or meadow. I have never allowed this to be done, for it is nearly as bad as killing the goose that lays the golden egg. I have also contended that newly seeded grounds should not be cropped off in the fall of the year unless very heavy. It is also a bad policy to pasture too early in the spring—that is, for keeping up a supply of pasture. I hardly ever allow the ground to become bare from over-cropping or grazing. You will never have land get what is called "hide-bound" if you leave a fair amount of grass on the soil to protect the roots, and grass will start, and the drouth will not affect the crop if the grass is left longer in the fall and not pastured so early in the spring.

Gwillimbury E., York : The effects of winter weather have been very peculiar during the past year. I have a field of twelve acres sown with fall wheat that had a wind-break on two sides, and it is looking exceptionally well at present. I have another field of thirteen acres that was exposed to the full sweep of the cold winds, on several acres of which there are not a dozen plants to the square rod alive, so completely was it killed.

Mara, Ontario : Although considerable corn is grown here, and a number of silos have been built during the past two years, yet farmers are growing more roots each year. Turnips and mangels—the latter more especially—are grown in large quantities by almost every farmer. Mangels are considered better for hogs than turnips. They are usually "pulped" and fed to hogs with or without chop, and give good results. They are also fed to cows.

Darlington, Durham : More hogs have been fed the last two or three years than formerly. In winter I feed them twice a day from the time they are weaned. I give mangels once a day, and a good feed of mixed meals, say one part each of oats, barley, peas and buckwheat, mixed with milk or swill. At from eight to nine months they will weigh 250 lb., live weight. There is money in feeding swine in this way, but they must have a warm pen while feeding mangels. About two weeks before shipping give them meal twice a day.

Percy, Northumberland : Farmers are making no money. The cost of working the farm is too great compared with the returns. Many are giving it up as an unprofitable business, as when expenses are paid there is nothing left for interest on capital. The farm laborer who is engaged at 75 cents a day and board is a king compared to the man who employs him.

Winchester, Dundas : The most of our farmers have good, warm stables for cows and horses. The silo is pretty common now, but many cut up their corn and feed it cured as in the past. Others cut up the corn, hay and straw together and feed it.

Kenyon, Glengarry : We are badly off for tile for draining purposes. Our land wants underdraining, and our farmers are becoming more convinced of that fact every year.

Hawkesbury, E., Prescott : Farmers are feeding their cattle better than they used to in this township. There are now quite a number of silos in operation. Some sow corn, and feed dry to their cattle.

Algona, S., Renfrew : The principal change in agricultural methods in this township is that we sell less hay and grain, feed our cattle better, and sell more live stock, which we find pays.

Laxton, Victoria : About the middle of February a disease broke out among milch cows. It attacked cattle in other parts of this district and also in the village of Coboconk. All the animals had to be destroyed. A veterinary surgeon was sent from Toronto, who pronounced the disease to be non-contagious, and stated that it had been caused by the cattle eating hay affected with ergot—principally June grass. About twenty head of cattle were lost from this cause.

Snowdon, Haliburton : Sheep husbandry, for which this country is eminently adapted, is, I am glad to report, extending rapidly, and promises to become one of our leading features, if buyers would come in.

Monck, Muskoka : By chopping the grain and cutting the hay, and mixing and moistening with water, we can feed four horses upon the same quantity we formerly used to feed to two.

St. Joseph, Algoma : Stock-rasing is nearly altogether taking the place of grain-growing, and if grain could be brought in at a reasonable cost many would buy it in preference to raising it themselves.

From the August Returns.

Harwich, Kent: People are resorting to deep bored wells, and water can generally be found at from 130 to 150 feet, although not in every case. With the water there is frequently gas; not enough for practical use, but enough to blow open the valves of the pump, and thereby injure the pumping.

Yarmouth, Elgin: Hay will be the poorest crop since 1859, the year of the June frost. The drouth has ruined the new seeding of clover.

Windham, Norfolk: There has been much Hungarian grass (millet) and corn sown to take the place of hay, and they are looking well where the grasshoppers have left them alone.

Cambro', Haldimand: On account of hay being so short it was difficult to rake it clean. Some of the farmers rigged tables on the mowers and raked off the hay by hand.

Moore, Lambton: Farmers have planted more than usual of corn, which looks well, and will furnish winter feed for stock.

Plympton, Lambton: One cattleman beside me has 130 head of live stock in fine condition, but has been soiling them. I help my cows by cutting down small trees. They devour the leaves greedily.

Wawanosh, E., Huron: I never saw the rain go in streaks as it has done this year. It has often threatened rain here, and perhaps we would get a few drops, while a mile from us they would get quite a shower.

Derby, Grey: Between the hornfly and poor pastures the outlook for the winter is not very good.

Euphrasia, Grey: Hay was so short and scarce that several farmers had to turn their stock into the meadows to keep them alive. Alsike is also short; it is almost impossible to cut it with machinery.

Vespra, Simcoe: It is curious to notice the vagaries of the weather the past summer. The thunder showers travelled in streaks a few miles in width. Up to the 2nd of June a strip of country here from five to seven miles wide had no rain to do any good since seeding; while to the north and northeast of us, in Flos and Medonte, for a strip of about ten or twelve miles wide, they had pretty regular showers all summer, and they have splendid crops of all kinds.

Dumfries N., Waterloo: Corn has been sown pretty extensively, and is a good crop.

Louth, Lincoln: A lot of fodder corn and millet has been sown.

Flamboro' E., Wentworth: There is a great deal of fodder corn sown and late turnips, so around here we will, I think, be able to winter our stock over.

Glanford, Wentworth: Hay is the lightest crop ever known here, but the deficiency in a measure will be made good by the large area of corn planted for fodder.

Glanford, Wentworth: Every preparation conceivable, such as sowing rape, rye, corn and millet, is being done for the fall and winter.

From the November Bulletin.

Aldborough, Elgin: The horse market is generally complained of as being very bad, but on the contrary there were never so many buyers around as in this year, and there is not a saleable horse left. True the prices were not high, but the writer sold four four year olds by a first class trotting bred stallion for $100 each, with very little expense. The sire stands at only $13, and is cheap at that. Many farmers still patronize inferior stallions, and that is why they cannot sell their offspring. There are lots of culls left to eat the hay that might go to fatten other stock, for unless the horses are right no one wants to buy.

Plympton, Lambton: For the first time in my experience every farmer has had more grain than he "expected"; and grain has turned out so well that the price of threshing has been lowered from two cents per bushel all around to one and a half cents.

Hullett, Huron: The farming industry is very depressed on account of low prices. The first want is more underdraining, proper care of the manure heap, and getting the manure into the soil especially where the land is heavy as soon as possible. I think, where it can be done, taking it right from the stables and putting it right on the land is a great saving both of manure and labor.

Wawanosh E., Huron: I have been a resident of this township for thirty-four years, and I never saw feed so scarce with everybody. I do not believe there are a dozen strawstacks in the township; and as turnips are a very poor crop—in fact, with some they are a complete failure—I predict a great scarcity before spring.

Wawanosh W., Huron: I would suggest that a law be passed to stop as much as possible the shooting of birds. Men should be prohibited from carrying a gun off their own premises unless they pay a license. I heartily endorse what some of your correspondents say about bringing out those young children from the slums of the old country, and sowing them broadcast over the land. Our legislators should put a stop to it. We can produce enough of them here without importing them.

St. Vincent, Grey: Farmers are selling everything possible hoping to reduce their stock so that they can carry the balance through, and the result must be a great scarcity of productive stock next year. The embargo on our cattle going to Great Britain is a grevious loss under existing circumstances, and it closes that outlet for stockers, compelling sales to the northwest at such prices as will pay the buyer to ship them 1,000 miles westward, feed them and return them over the same route past their old homes to the English market, there selling to make a profit on the original cost, and the extra expense incurred in the long railway carriage and for the dealer who shipped them to the ranches. All of which might have been saved had due care been exercised in inspecting the cattle shipped through Canada, as it had been agreed with the British government should be done.

Sarawak, Grey: I am firmly convinced that the drouth of this year in western and middle Ontario will be a blessing in after years: 1st, in leading farmers to give up depending so much on hay for fodder. 2nd, in leading farmers to raise corn for fodder and to use the silo. 3rd, encouraging farmers to go into dairying more and into stock raising, as wheat is unprofitable to raise. 4th, by showing them the need of keeping more milch cows, and growing more fodder for green and winter feed.

Fullerton, Perth: The sparrows are becoming a great nuisance in this country. They destroy much grain, are very dirty, and are driving away singing and other harmless birds. I would suggest, in order to exterminate them, that a united effort be made by property owners, and in order to secure that end special days be appointed by the Government, and that it be known through the public papers.

Waterloo, Waterloo: The next season will be a hard pull for farmers. As there is a great shortage of straw it will be well for farmers to use absorbents about the stables to absorb the liquids, as there will be a great loss in the pile, and next year the manure will be hauled out in far less time than the farmers will like. A good many in this section are sowing rye to turn down instead of manure next summer. This is what all farmers ought to do, even in a good season. Rye has had a hard name for many years, yet it is one of the best friends the farmer has if he only knows how to keep on the good side of it. It has come in good to the farmer more than once. No doubt the present depression among farmers will be a great lesson to those who can survive, and when a change comes they will better know how to take care of what they have. One of the lessons taught will be the care of the manure pile. A badly cared for manure pile is a great waste on a farm; also the trading of ashes for poor soap, especially when there is plenty of ashes in the town which he himself might purchase at a very low price.

Grantham, Lincoln: The people want to underdrain their land where needed, more than at present, to manure more, to farm less land. They undertake to farm too much land and trust too much to the season or to Providence, instead of to their own exertion.

Brock, Ontario: As farming is the chief industry in Canada I would suggest in the first place that our professional men should not exact as large fees as formerly, and try and encourage farmers by leaving a little margin of profit in their hands. I would also suggest that our paid officers take less salaries, for it must be cheaper now than in years gone by. I would also suggest that farmers' wives and daughters put less cloth in their sleeves, and that farmers' sons drive fewer top buggies. And last, but not least, I would recommend that there be more underdraining done, more manure made and saved, and a better class of stock raised. Poor stock do not pay for their keep, therefore there is no margin of profit left in the farmers' hands.

Camden, Addington: It seems that every line of farming a man takes up, after a few years, goes to the wall. The grain market went: the horse market went; the lamb market went; the cattle market went; and now the cheese market is gone; and the hog market is the next to go. The price of everything we raise is low, not much shrinkage in what we buy, and taxes and insurance increasing.

Yonge, Leeds: Farmers are laying a lot of tile this fall, I think more than has ever before been put down, as they are coming to know the value of draining.

Cumberland, Russell: Farms are improving each year. This year a good deal of stoning and stumping is being done and fields are being laid out in larger size with wire fencing and cedar posts.

Clarence, Russell: Farmers who are so fortunate as to have good fertile farms, free from stones and kept clean of noxious weeds and insect pests and can perform the labor necessary without hiring help to any extent or within their own resources, are making a fairly good living, and doing some improvements or banking a little, but it requires "eternal vigilance," unremitting diligence and allows of very little recreation. Those who have adopted the improved methods of dairying, taking good care of their stock and are growing large crops of fodder corn and roots for stock, in place of grain growing, are finding it generally more profitable than grain and hay raising.

Williamsburg, Dundas: Farmers are now largely mixing the corn with straw, cutting both together and throwing the cut mixture into an ordinary mow in the barn where it keeps perfectly and does not ferment, the straw preventing fermentation. It is considered much better cattle feed than ensilage, and saves the price of a silo. The cornstalks intended for cutting up thus and mowing away are not drawn in as soon as cut in the field, but must be stood up in the field until pretty well dried before being subject to cutting up and storing in the manner described.

Lancaster, Glengarry: The only suggestion is for the farmer to stick to it till times will change, and try to lessen the cost of production. We in the east of the Province are fast going into winter dairying, doing away with horses, going into cows, feeding corn; but the great drawback is lack of laborers.

Elmsley, Lanark: Fruit trees and vines look well. We may thank the Bureau and College for it. I sprayed my trees and vines as instructed and am well paid.

Watt and Monk, Muskoka: We need a spirit of love for farm life inculcated in our country schools. Our children as they grow up do not seem to take the least interest in the occupation that they are probably destined to follow. They seem to be living for the present hour only, and when they are thrown upon their own responsibility they find themselves in the lane when they should be in the field; they find themselves lacking in the knowledge necessary to ensure a reasonable amount of success in the calling they are striving to live by.

THE PEANUT.

Can the peanut be successfully grown in Ontario? The question is one which is worth considering.

An instance has occurred which suggests the advisability of further experimenting with this plant—a plant which not only yields a popular edible nut, but also furnishes a fodder not to be despised in seasons such as that prevailing during the fall and winter of 1895. The attention of the department was directed to a brief paragraph floating in the provincial press to the effect that Mr. Samuel Scissons, of South March, in the County of Carleton, had succeeded in raising peanuts on his farm. A request was made of Mr, Scissons for particulars, and his reply, made under date of November 9th, 1895, was as follows:

"I have had but one's season's experience. Last spring I received with other seeds from a Toronto seedsman a small packet containing ten peanuts, which he said he was informed would grow in this country. I planted the nuts on the 15th day of May, on land which had been prepared for a root crop—a warm, loamy soil. In his instructions for growing the seedman gave what he called the secret of growing peanuts, which was to cover the vines with earth as soon as they began to bear blossoms. When the time came for blossoming I covered four of the vines, leaving the ends exposed; the other four vines I did not cover, as I was afraid of smothering them out. About the first of October they got a little frost, but it did not hurt them much. On the 20th of October they were killed with frost, but they appeared to be perfectly well matured. I took them up on the 26th of October. From the four vines I had covered, I had one quart of excellent nuts. The other vines which were not covered had only a few nuts on them. My conclusions are that we should plant as soon as the land is warm, on a warm, loamy or sandy soil, well exposed to the sun, and be sure to cover the vines well with earth as soon as they begin to blossom."

In a bulletin entitled, "Peanuts: Culture and Uses," recently published by the U.S. Department of Agriculture, a large amount of information is given regarding the plant, from which the following is selected:

Description. The peanut (*Arachis hypogæa*), known also in different localities as the earthnut, groundnut, ground pea, goober, and pindar, is a trailing, straggling annual, growing from one to two feet high, with thick, angular, pale-green hairy stems, and spreading branches, and has the peculiar habit of maturing its fruit underground. It is supposed to be a native of Brazil, but it is now largely grown in Europe and Africa. Strictly speaking it is not a nut at all, and should be more properly called the ground pea. Its blossom is at the end of a long pedicel-like calyx tube, the ovary being at the base. After the fall of the flowers the peduncle or "spike" elongates and bends downwards, pushing several inches into the ground, where the ovary at its extremity begins to enlarge, and develops into a pale, yellowish, wrinkled, slightly curved pod, often contracted in the middle, containing from one to three seeds. Should the "spike" by accident not be enabled to thrust its point in the ground within a few hours after the fall of the flower, it withers and dies. When fully grown the pods are from one to two inches long, of a dusky yellowish color, with a netted surface. There are several varieties, but the Virginia running peanut appears to be the most popular sort.

Climate suitable for Culture. While the peanut requires a climate where there is a season of five months free from frost, it is not necessary that this should be a period of extreme heat, as the seeds form during the cool weather in the latter part of summer and early autumn. It is probable that on suitable soil the peanut will grow in any latitude where Indian corn will thrive, but whether it will be a profitable crop depends upon other considerations than its ability to withstand the climate. The most favorable weather for the peanut is an early spring, followed by a warm summer of even temperature, with moderate moisture and freedom from drouth, and an autumn or harvesting time with very little precipitation, as rain injures the newly gathered vines and nuts.

Soil. While an open sandy soil which does not stain the shell is the ideal one for the peanut, it thrives on any frialable soil that contains a sufficient quantity of lime and humus. The presence of lime is necessary for the development of the nuts, as without lime there may be luxuriant vines bearing nothing but "pops," or imperfectly developed pods. If the soil does not already contain lime in sufficient quantities the deficiency must be supplied by the use of some form of commercial lime, such as burnt oyster shells, burnt limestone, or marl. The peanut plant draws a large part of its nitrogen from the air, but it draws a considerable amount of phosphoric acid and potash from the soil. If the entire plant is removed from the soil the crop becomes an exhausting one, and the fertility of the soil must be restored by the use of manures and the rotation of crops.

Planting and Culture. Peanuts should be planted in well pulverized soil to a depth of four inches. The distance between the rows should be from 28 to 36 inches, varying with the fertility of the soil and of the variety. Carefully shelled and selected kernels should be used for seed. The seeds should be planted from twelve to twenty inches apart, two to the hill, and covered about an inch deep, either with a hoe or a small turn plow. All grass and weeds must be kept out of the field, and the soil kept loose and open, that the tender "spikes" may meet with no resistance in penetrating the ground. With proper culture there seems to be no need of following the old practice of covering the bloom of the plant. Cultivation should cease when the pods are laid, usually about the latter part of July.

Harvesting. In harvesting the crop the practice is to pass down each side of the row with a plow, made especially for the purpose, without a moulboard, and with a "sword," or long cutting flanges welded to the point. The plow is run deep enough to sever the taproot, without disturbing the pods. The vines are then lifted from the ground with pitchforks, and placed in rows; they are afterwards stacked around short poles. Two weeks later the pods should be dry enough to be picked off. After picking, the nuts are cleaned and placed in bags holding four bushels, and either stored away in dry, well-ventilated sheds or sold.

Uses of the Crop. The larger portion of the American crop of peanuts is sold by street vendors, chocolate manufacturers, and for the manufacture of oil. Peanut oil is used for lubricating and soap making, and is a good substitute for olive oil for saleds and other culinary purposes, and as a substitute for lard and cottolene and butter in cooking. The residue from oil making, known as "peanut cake," is a highly valued cattle food in the countries of Europe, and is also ground into fine flour and used as human food. It makes good soup, griddle cakes, muffins, etc., and is one of the most nutritive of foods. It has not, however, been sufficiently tested to make it certain that it will be useful as a regular article of diet. The vines when dried become a very nutritive hay, readily eaten by stock; but in feeding care must be taken lest it give them colic. Peanut hay is apt to contain considerable dirt, and in order to prevent it producing coughs in the animals eating it, should be fed from low troughs or mangers, and never from overhead racks.

Ontario Seedsmen on the Peanut.

Enquiry made by this Department of some of the leading seedsmen of the Province elicited the following replies:

Wm. Rennie, Toronto: "In reply to your enquiries about peanuts we would say, that last spring we distributed small packets to about 18,000 customers. Many of them have sent us reports already, and it is likely we will receive a great many more reports during the winter and spring. Some have succeeded very well—in fact some of them intend growing a small quantity of them next season for sale. We are obliged, however, to say, that quite a number have failed to obtain satisfactory results, but we think probably in many cases it is due to the fact that the cultural directions sent with the sample were not sufficiently explicit. The plants require to be covered when growing. Some of our customers appear to have covered them too deeply, while others did not cover them sufficiently or did not cover them at all. We grew quite a quantity in our trial grounds at Swansea and had very satisfactory results. We purpose distributing a number of packets this season and also intend continuing the experiments we started last year. We believe that in some sections in Ontario where the season is comparatively early, and the soil of a light sandy or loamy nature, peanuts can be grown quite successfully, and may be made to pay as a crop."

J. A. Simmers, Toronto: "We have heard a report of an experiment when growing peanuts in a limited way from a customer who was in our office recently, and who resides in the north-eastern section of Ontario. He stated that the experience he had with peanuts was that they did not give satisfaction. They grew splendidly for a time, and then suddenly seemed to discontinue growing, which may have been owing to the past dry season. We questioned the customer referred to considerably in regard to the peanut crop, and as to whether it would be profitable to grow them, and the opinion expressed by him was to the effect that he did not favor the growing of them, but he would try again and let us know how they turned out."

The Steel-Briggs Co., Toronto: "We are of opinion that our season is too short to admit of their producing a crop. We shall be glad if Mr. Zavitz (Experimentalist at the Ontario Agricultural College) could give them a trial, and which we may do this season if we can find time. Another season we will be in better shape to experiment on a larger scale."

J. S. Pearce & Co., London: "We first introduced the peanut here three years ago, and those who have been growing them have been fairly successful, especially during the past year. We sent out about 1,400 packets of peanuts in 1895, and have yet to hear of a single complaint or a single person who had any failure in growing these. In and around London, and where the soil is light and warm and with a sunny exposure, there is no reason why they cannot be grown successfully, and we think profitably. We frequently hear of people who tell us that they had splendid success, and we may instance one person whose testimonial you will see in our catalogue for 1896, page 11, in which this gentleman speaks in the very highest terms of his success in growing peanuts."

Following is the paragraph referred to:

Thomas Flavn, Ealing, Ont.: "I purchased some peanuts this year and had a very fine crop, and expect from my experience gained to do far better next year. The sample I raised was pronounced by a prominent confectioner to be much superior to the imported article. I shall grow them more extensively, as they are profitable."

THE BLUEBIRD.

"And the birds sang 'round him, o'er him:
'Do not shoot us, Hiawatha!'
Sang the Opechee, the Robin,
Sang the Bluebird, the Owaissa."—*Longfellow.*

At the suggestion of the Biological Section of the Canadian Institute a circular containing the following questions was sent to our correspondents about the end of July:

1. Were Bluebirds seen in your vicinity last spring (1895)?
2. Have any remained to nest?
3. Are they more or less numerous than in former years?

The object of the enquiry was to find out whether the absence of the Bluebird in the Province was as general as had been rumored. It was also hoped that something might be said by correspondents which might indicate why this "color-bearer of the spring brigade"—his back reflecting the sky and his bosom the earth, and his rich and mellow ministrelsy gladdening the early spring time hours—was this year shunning so many of his favorite Ontario haunts.

In this connection the following description of the bird may be of value:

BLUEBIRD: *Sialia sialis.*

Length: About six and a half inches.

Male: Sky blue above; breast, reddish brown; belly, white; wings, blue, with dark edging; bill and feet, black.

Female: Duller in color. Young, speckled on breast and back.

Song: A sweet, plaintive warble, as if saying, "Dear, dear, *think* of it, *think* of it." Burroughs says it continually calls "Purity, purity," the accent in each case being the same.

Season: Comes to Ontario in March and April, and remains until late in October.

Breeds: All through its range.

Nest: In natural or artificial holes in trees, stubs or posts, such as knot holes or abandoned holes of the woodpecker or in bird boxes; usually a mere lining, composed of miscellaneous material loosely put together.

Eggs: Four to six; pale blue, shading sometimes to white; unmarked.

Range: Eastern United States to the eastern range of the Rocky Mountains, north to Manitoba, Ontario and Nova Scotia; south in winter from the Middle States to the Gulf States and Cuba. Bermudas, resident.

The Monthly Weather Review, of the Dominion Meteorological Service, for April, 1895, reported Bluebirds first observed in April as follows: Thedford, 3rd; Princeton, 1st; Georgetown, 5th; Lucknow, 14th; DeCewsville, 1st; Banff, 21st; Lakefield, 7th.

Describing the autumnal flight of birds southward, William Higgs says: "Robins and bluebirds leave in flocks and frequently travel in company—some birds being social as well as gregarous while on migration, though not at other times—the approach of the time for their departure being announced, several days before the actual start, by the birds performing aerial evolutions together in bunches of two or three dozen, very often at a height of four or five hundred feet. As is the case with nearly all our songsters, the date of their disappearance is preluded by two or three weeks of more or less vocal activity, as if the birds before they left had tantalizingly determined to remind us of the copiousness of their spring performance."

In his evidence before the Ontario Agricultural Commission, in 1881, Dr. William Brodie, of Toronto, said of the feeding habits of the Bluebird: "The Bluebird in early spring is a very general feeder. It feeds on grain pretty largely, on the seeds of the wild rose, ants, small beetles, and the larvæ of diptera."

Prof. Saunders, on the same occasion, said: "The Bluebird, I think, feeds altogether on insects, though it may take a few seeds when it cannot get enough insects."

John Burroughs devotes a chapter to the Bluebird in "Wake Robin," and pays the following charming tribute to this ever welcome cerulean visitor:

"When Nature made the Bluebird she wished to propitiate both the sky and the earth, so she gave him the color of the one on his back and the hue of the other on his breast, and ordained that his appearance in spring should denote that the strife and war between these two elements was at an end. He is the peace harbinger; in him the celestial and terrestrial strike hands and are fast friends."

In his admirable work on "Birds of Ontario," Mr. T. McIlwraith has the following to say of the Bluebird:

"In former years the Bluebirds were among our most abundant and most familiar birds, raising their young near our dwellings and returning year after year to occupy the boxes put up for their accommodation. Since the advent of the English Sparrow they have been gradually decreasing in numbers, and are now seldom seen near their old haunts, from which they have been driven by that pugnacious tramp, *Passeur domesticus*. They are still common throughout the country, where they are everywhere welcomed as harbingers of the spring, and in the fall they linger till late in October, as if loth to depart. This species was a special favorite with Wilson, on account of which it is often spoken of as Wilson's Bluebird, to distinguish it from the Indigo bird, and one or two other species to which the name is sometimes applied."

Desiring further information regarding the feeding habits of the Bluebird and his relation to agriculture generally, a special request was made of Mr. McIlwraith for fuller notes concerning the bird, to which he kindly made the response quoted below. His comparison of the three leading varieties of birds of blue color is clear, clever and timely, as several of our correspondents appear to have confounded the gentle and friendly Bluebird with that noisy and rascally fellow the Blue Jay on the one hand, and the more retiring and woods-loving Indigo Bunting on the other. Mr. McIlwraith writes:

"It is now well known that during the past winter a very great reduction has taken place in the number of Bluebirds in all parts of the country which they used to frequent. This has been the result of two sorts of starvation, both of which are much to be dreaded, viz., *hunger* and *cold*.

"Correspondents writing from the neighborhood of Washington, where these birds used to spend the winter, have told me of finding many dead specimens in the orchards during the cold spells, and all of these were observed to be much emaciated.

"During the greater part of the season the food of the Bluebird consists of insects of different sorts, many of which are prejudicial to the crops, and it is in this connection

that the absence of the birds will be chiefly felt by the farmer. One writer who has made the calculation estimates that from fifty to one hundred thousand insects will be killed by a pair of Bluebirds in the four months during which these constitute their principal food. Towards the close of the season fruits and seeds are also used, but the chief food of the Bluebird is insects.

"The Blue Jay and the Bluebird resemble each other in the general color of their plumage, but in all other respects they are as widely different as they can well be. In disposition the Bluebird is gentle, tender, loving, affectionate, while the Jay is harsh, cruel, treacherous, cunning. In the matter of diet the Jay is ready to use anything that is eaten by any other bird. Of course he is an epicure where there is any choice, but in spring he is glad to feed on the buds of the lilac and other shrubs. As the season advances he does not hesitate to rob the nests of other birds of eggs or young, tearing the latter to pieces like a hawk. Moths and butterflies also receive his attention, but as the fruit season approaches he revels amidst the abundance he finds in the woods. Beech nuts, acorns, chestnuts, all are enjoyed and many stowed away for winter use. He also hangs around the farm house, seeking a chance to steal grain, which makes him generally unpopular and liable to be shot as often as opportunity offers.

"There is still another little bird resembling the other two in color, but in other respects differing from both. This is the Indigo bird. The Bluebird is semi-domesticated and seems to delight in having his home near our dwellings, though of late he has been driven off by the house sparrow. The Indigo, on the contrary, keeps in the woods and is seldom seen elsewhere. The favorite perch of the male is on a bare twig near the top of a tree of medium height, from which he sends forth his spirited song to cheer his plainly dressed mate while attending to her domestic duties among the underbrush. For food the Indigo bird sometimes takes beetles or other insects, but his short, stout, conical bill shows that nature intended him for a seed-eater, and it is among the seeds of our native weeds he finds his daily fare. He first appears in our woods in the early part of May and leaves again in September."

The remarks of our regular correspondents, which follow, make interesting reading. The statements regarding the scarcity of Bluebirds are nearly unanimous, although it would seem from references here and there that the Blue Jays have turned up as loud and reckless as ever. The majority of those commenting on nesting say that the Bluebirds did not build this season, while a few report nests. Correspondents are not agreed as to the reason for the present condition of affairs. One in the county of Perth points out that a few years ago very severe weather prevailed after the arrival of the Bluebirds, the thermometer touching close to zero. The birds disappeared, and have not since been so numerous. Another calls attention to the fact that since the stumps rotted out—and in such places the birds prefer to build—the Bluebird has not been so frequently seen. The general trend of opinion, however, is toward the sparrow as the main enemy of the Bluebird, as well as of other birds friendly to the farmer and charming to mankind. Following is what correspondents have to say upon the question:

Chatham, Kent: A few bluebirds appeared in the last of March.

Raleigh, Kent: Some bluebirds came but did not build, disappearing soon after they were first seen.

Bayham, Elgin: There are very few. I do not think I have seen one in two months.

Windham, Norfolk: We had a few, but I do not think they remained to nest, as they were gone about two months and came back about the middle of July.

Cayuga, N., Haldimand: No birds can stay where these infernal sparrows are around.

Sherbrooke, Haldimand: None at all now. Last year they were plentiful as usual.

Enniskillen, Lambton: There have been very few birds of any kind around this year. Wild fruit has been a complete failure.

Moore, Lambton: Since stumps are rotted out in this locality I have not noticed many. Flora and fauna are changing from year to year since settlement.

Sarnia, Lambton: Birds of all kinds seem scarcer than usual except sparrows. Even the crows are giving these parts a wide birth this year.

Turnberry, Huron: I saw no bluebirds, and have not heard of anyone who did.

Tuckersmith, Huron : Bluebirds were rather more plentiful than usual, but I fancy the number which nested must have been small.

Huron, Bruce : Bluebirds are less by seventy-five per cent. than in former years.

Normanby, Grey : We saw a few bluebirds in early spring, but I know of none nesting this summer.

Sunnidale, Simcoe : Some bluebirds were seen early in the spring, but we do not think they remained to nest as we see nothing of them now.

Vespra, Simcoe : A few bluebirds were seen here this spring, but I did not notice any later on. Twenty years ago these birds were plentiful here, and always nested. They invariably nested in stumps like the highholders, making the nest in a hole or hollow place. They are very rare now.

Ekfrid, Middlesex : Bluebirds have been very scarce. I saw two pair this spring, but I have seen no proof of nest.

Westminster, Middlesex : Birds of all kinds are extremely scarce. Except a few blackbirds, crows and sparrows, there is not one where formerly there were scores.

Blenheim, Oxford : I can find after a good deal of enquiry only one neighbor who says she saw a few in spring.

Fullarton, Perth : Bluebirds have not been so numerous in recent years as they were years ago, especially in the early settlements. Some years ago spring opened early, and robins and bluebirds came early. There came a very severe frost, however, the thermometer dropping almost to zero, and the bluebird disappeared, very few being seen during the summer, and have not been so numerous since. The absence of the little beauties has often been a cause of regret.

Minto, Wellington : A few bluebirds appeared in this vicinity in the spring, but I have seen no nests.

Waterloo, Waterloo : A few came at the time the blackbirds came, but I have not seen any more up to [illegible].

[illegible]elancthon, Dufferin : I saw just one pair in the spring, but have heard of none nesting.

[illegible]iagara, Lincoln : There are very few bluebirds. The sparrows drove them away.

Binbrook, Wentworth : A few were seen in the spring, but they did not nest.

Esquesing, Halton : They came as usual in the spring, but I think they left during the cold spell in May. The "pe-wee" is as scarce in this locality as the bluebird, and did not come last spring.

Chinguacousy, Peel : The impression prevails with us that the sparrows have chased them away.

Markham, York : I saw only one or two bluebirds this season. I have not seen any nests, neither can I find anyone who has.

Brock, Ontario : I saw only one pair of bluebirds in the spring, but do not know of any nesting.

Cavan, Durham : We have none here, but sparrows are numerous.

Hope, Durham : We have lots of blue jays, but I do not know about bluebirds

Haldimand, Northumberland : I remember seeing only one or two bluebirds this spring, and I do not think they nested here. I have not noticed a wren, bobolink, Ohio brown thrush, cat bird or cuckoo, and but very few yellow birds.

Athol, Prince Edward : I noticed no bluebirds in this vicinity this spring. They used to be pleniful.

Kaladar, Lennox and Addington : I have not seen a bluebird this season.

Pittsburg, Frontenac : Bluebirds seem to have disappeared from this section. They were formerly among the early arrivals in the spring and generally went away early in autumn, about the time the swallows disappeared.

Crosby, N., Leeds : I have seen but one bluejay and no bluebirds.

Yonge and Escott, Rear, Leeds : I have seen only one or two bluebirds, but have noticed no nests.

Williamsburg, Dundas : I saw a few blackbirds this season, but I do not think they nested here.

Roxborough, Stormont : Bluebirds have not been so numerous this summer as they have been of late years.

Hawkesbury, W., Prescott : If you mean the small bluebird with the white breast, I think they are very scarce.

Clarence, Russell : There used to be a few, which came among the first birds in the spring. I may say that I have seen neither bluebirds, redbirds or orioles this summer.

Osgoode, Carleton : There were a few bluebirds this spring, but I don't think they remained to nest.

Pembroke, Renfrew : Bluebirds are very rare up here, but I have seen a few.

Elmsley, Lanark : I saw only one pair of bluebirds this spring. There should be a law prohibiting the wearing of birds' wings or bodies on ladies' apparel.

Otonabee, Peterborough : Bluebirds never have been numerous here, and are scarcer than ever.

Sidney, Hastings : There are none about here, where they have nested regularly for about ten years.

Watt, Muskoka : Bluebirds were plentiful in the spring, but very few remained to nest.

Cockburn Island, Algoma : This is the first season we have noticed the absence of bluebirds. Until this year we have remarked them nesting in the same stumps successive years.

STATISTICS OF

THE WEATHER AND THE CROPS.

THE WEATHER.

TABLE I. Showing for each month the highest, lowest, mean highest, mean lowest and mean temperature at the principal stations in Ontario in 1895; also the annual mean for each station.

Temperature.		Saugeen.	Birnam.	London.	Woodstock.	Stony Creek.	Toronto.	Lindsay.	Gravenhurst.	Ottawa.	Rockliffe.
		°	°	°	°	°	°	°	°	°	°
January	Highest	42.2	44.9	45.0	44.0	49.0	42.2	36.6	39.0	37.9	36.0
	Lowest	0.9	-6.4	-9.0	-5.5	-2.0	-0.6	-11.6	-24.0	-19.3	-27.0
	Mean highest	27.3	25.1	26.7	25.1	31.4	28.1	24.3	23.8	21.1	19.0
	Mean lowest	14.7	11.3	11.6	9.4	16.4	14.0	6.3	6.6	2.3	-4.4
	Monthly mean	20.18	18.20	20.87	18.82	24.41	21.62	15.41	15.40	12.93	5.14
February	Highest	40.0	44.7	45.0	42.0	49.0	44.3	46.2	42.0	38.0	45.0
	Lowest	-30.3	-24.3	-24.0	-22.0	-18.0	-21.2	-25.0	-32.0	-23.0	-30.0
	Mean highest	22.6	22.3	22.5	20.9	27.0	24.1	21.6	21.0	21.1	21.5
	Mean lowest	7.5	7.7	6.1	5.4	12.3	8.7	3.9	3.6	3.6	0.2
	Monthly mean	14.11	15.00	17.44	14.52	19.86	16.85	12.59	12.59	13.63	8.84
March	Highest	47.2	53.7	55.0	49.6	59.0	49.9	45.0	47.0	41.9	53.0
	Lowest	-9.5	-12.4	-8.0	-9.0	4.0	-1.6	-15.5	-23.2	-10.0	-32.0
	Mean highest	31.3	32.1	34.3	31.4	37.3	32.5	30.2	30.0	29.9	31.0
	Mean lowest	9.8	14.7	13.1	11.2	20.9	15.7	19.1	4.4	10.2	0.4
	Monthly mean	19.30	23.40	25.32	22.24	28.81	24.51	19.56	17.62	20.15	13.60
April	Highest	73.0	76.3	79.0	78.0	75.0	69.1	73.6	71.0	71.3	77.0
	Lowest	13.6	20.5	19.5	19.0	26.0	23.7	14.0	13.0	15.3	6.0
	Mean highest	51.3	54.4	55.9	54.5	52.7	51.2	53.9	51.0	51.2	54.4
	Mean lowest	32.2	35.3	19.5	33.4	36.2	35.5	31.9	30.5	32.2	28.1
	Monthly mean	40.38	44.85	47.33	47.31	44.24	43.35	42.68	41.39	42.45	38.75
May	Highest	85.9	92.1	94.0	90.8	97.0	93.4	94.7	87.0	93.5	97.0
	Lowest	25.2	25.5	25.0	23.7	29.0	27.9	27.2	28.0	27.5	26.0
	Mean highest	65.6	69.4	69.8	68.8	71.2	66.3	69.7	67.7	70.0	72.2
	Mean lowest	43.7	46.5	44.1	43.4	46.8	44.5	43.6	43.9	45.9	41.6
	Monthly mean	54.62	58.00	60.44	56.55	58.65	55.36	57.49	56.24	57.59	53.76
June	Highest	86.9	91.0	93.0	91.0	94.0	93.1	93.3	89.0	91.8	93.0
	Lowest	34.2	35.4	37.0	39.0	45.0	45.8	43.3	38.0	49.5	40.0
	Mean highest	75.1	79.6	82.0	78.8	82.4	78.9	83.0	79.8	80.8	81.5
	Mean lowest	52.3	56.0	54.5	50.4	58.2	56.7	53.4	54.1	57.8	52.6
	Monthly mean	63.42	67.80	72.67	68.09	70.54	67.90	68.22	67.12	69.53	64.39
July	Highest	87.7	92.9	93.0	91.5	94.0	90.0	97.7	92.0	91.2	93.0
	Lowest	40.6	39.0	40.5	37.5	46.0	49.1	39.6	42.0	46.0	40.0
	Mean highest	73.2	77.6	79.2	78.1	81.2	76.3	79.6	76.9	76.4	76.8
	Mean lowest	50.6	53.8	53.8	49.7	57.1	56.3	52.2	53.0	54.7	51.1
	Monthly mean	61.7	65.69	69.00	65.91	69.27	66.23	65.11	64.87	65.89	61.74
August	Highest	85.9	93.0	93.0	90.4	90.0	84.0	89.0	89.0	86.8	88.0
	Lowest	43.1	43.2	38.0	34.0	41.0	43.2	37.0	37.0	39.0	38.0
	Mean highest	73.1	76.2	79.8	78.8	81.3	75.6	77.0	75.8	76.5	75.6
	Mean lowest	55.5	55.4	55.0	50.3	58.9	56.2	54.3	53.6	54.2	52.4
	Monthly mean	62.11	65.80	69.25	66.47	70.11	65.09	65.09	64.09	65.16	60.19
September	Highest	87.6	91.7	91.5	90.0	96.0	93.1	91.4	88.0	90.3	92.0
	Lowest	34.1	34.0	30.0	27.0	35.0	36.3	31.3	29.0	34.0	28.0
	Mean highest	71.1	71.6	73.8	72.4	75.9	70.8	71.9	70.3	70.9	72.2
	Mean lowest	52.2	54.4	51.5	46.5	54.3	50.5	48.8	48.5	49.2	45.4
	Monthly mean	59.97	63.01	64.02	61.48	64.61	60.63	58.44	59.28	58.90	54.17
October	Highest	63.0	66.1	67.0	63.8	69.0	65.8	64.0	64.0	65.8	69.0
	Lowest	24.1	23.5	18.0	23.0	25.0	23.2	7.9	14.0	16.5	13.0
	Mean highest	51.1	51.0	52.8	50.8	55.7	51.1	48.8	49.6	50.6	48.1
	Mean lowest	35.0	35.4	32.5	30.0	35.1	35.1	30.3	31.8	30.4	28.8
	Monthly mean	41.63	43.17	43.91	41.80	45.20	43.26	39.09	40.53	39.92	35.41
November	Highest	66.8	69.9	66.0	64.8	69.0	59.2	59.9	63.0	60.0	66.0
	Lowest	11.3	15.2	10.0	11.0	15.0	13.3	3.4	2.2	1.5	-7.0
	Mean highest	42.7	42.6	43.8	43.4	45.9	43.2	41.9	39.4	41.3	37.9
	Mean lowest	29.6	30.6	27.9	27.6	30.8	30.6	26.9	27.2	24.6	21.7
	Monthly mean	34.29	36.60	35.85	35.50	38.02	36.69	34.40	33.35	32.93	26.88
December	Highest	59.7	57.3	57.0	55.0	62.0	53.9	55.7	54.0	52.8	49.0
	Lowest	-12.1	-10.2	2.0	-5.5	0.0	1.4	-7.5	-16.2	-17.5	-27.0
	Mean highest	36.0	34.0	35.4	32.5	37.9	36.0	33.1	32.2	28.5	27.2
	Mean lowest	21.9	21.7	21.5	15.6	24.8	23.2	16.9	18.2	11.3	11.6
	Monthly mean	28.66	27.85	28.45	24.02	30.71	29.85	25.02	25.66	19.87	18.08
	Annual mean	41.70	44.11	46.21	43.56	47.04	44.28	41.92	41.51	41.56	36.75

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TABLE II. Showing for each month the annual average of the highest, lowest, mean highest, mean lowest and mean temperature at the principal stations in Ontario derived from the fourteen years 1882-95; also the average annual mean at each station for the same period.

Temperature.		Saugeen.	Birnam.	London.	Woodstock.	Stony Creek.	Toronto.	Lindsay.	Gravenhurst.	Ottawa.	Rockliffe.
		°	°	°	°	°	°	°	°	°	°
January	Highest	45.2	46.2	46.6	46.7	51.7	44.5	41.7	42.4	39.8	37.6
	Lowest	-7.6	-10.5	-9.9	-13.2	-4.1	-7.9	-21.9	-27.1	-22.4	-33.3
	Mean highest	27.2	25.9	27.7	27.3	32.8	27.9	23.4	23.2	18.8	17.7
	Mean lowest	12.1	13.0	12.7	9.7	19.0	12.9	5.5	3.1	0.4	-7.1
	Monthly mean	19.78	19.42	21.33	19.99	21.84	21.01	14.78	14.11	10.24	5.51
February	Highest	45.1	47.2	46.2	46.0	47.9	43.8	42.4	43.1	39.8	42.2
	Lowest	-10.5	-13.4	10.8	-11.7	-5.8	-8.6	-17.6	-24.0	-22.6	-34.5
	Mean highest	27.9	27.4	29.1	29.0	33.0	29.0	25.9	25.5	21.4	21.6
	Mean lowest	11.2	12.8	12.4	10.2	18.5	13.1	5.6	3.9	1.8	2.2
	Monthly mean	19.07	20.08	21.63	21.15	23.44	21.64	16.05	15.39	12.30	8.00
March	Highest	52.0	55.8	55.2	54.8	57.0	51.5	48.8	48.7	44.9	49.2
	Lowest	-4.7	-6.1	-3.8	-5.1	4.4	2.3	-9.6	-14.9	-10.4	-24.6
	Mean highest	33.4	34.4	35.5	35.1	39.3	34.5	32.4	32.6	30.8	31.7
	Mean lowest	16.4	18.8	18.5	16.8	24.9	20.1	14.3	11.3	12.6	5.1
	Monthly mean	24.14	26.18	27.85	26.78	30.09	27.43	23.09	22.38	22.06	18.59
April	Highest	73.6	77.2	76.0	75.8	77.2	69.9	74.0	69.4	72.2	73.2
	Lowest	13.6	16.0	18.3	16.3	23.7	20.9	12.5	9.9	12.5	4.2
	Mean highest	48 9	52.4	51.7	52.7	53.8	49.8	50.9	48.7	49.5	49.5
	Mean lowest	30.4	32.7	31.4	30.8	36.3	32.8	29.4	28.0	29.8	25.0
	Monthly mean	38.81	42.51	44.01	42.41	43.43	41.21	39.65	38.35	40.23	36.59
May	Highest	79.4	83.0	81.4	81.0	83.3	76.9	82.4	81.6	82.9	85.5
	Lowest	28.0	28.0	30.0	28.5	34.8	31.9	27.9	27.3	30.2	24.4
	Mean highest	60.3	65.1	65.2	64.0	64.9	61.4	64.7	63.1	65.6	64.9
	Mean lowest	40.4	42.7	43.4	41.3	45.0	43.0	40.9	41.4	43.4	37.8
	Monthly mean	49.68	53.91	55.57	53.56	54.01	52.15	52.62	51.97	54 97	51.00
June	Highest	85.5	88.8	88.1	88.3	91.7	86.3	89.7	88.3	89.1	90.4
	Lowest	37.5	36.5	39.3	38.2	44.4	43.1	38.5	37.1	41.6	34.4
	Mean highest	71.3	76.9	76.4	76.6	79.7	73.7	76.8	75.4	76.5	76.1
	Mean lowest	50.8	53.3	54.1	52.2	58.5	53.9	51.5	51.8	54.2	47.8
	Monthly mean	60.73	65.10	66.46	65.32	66.61	63.70	64.06	63 57	66.00	61.80
July	Highest	86.9	91 8	90.4	90.4	94.8	89.0	91.4	89.0	90.4	90.7
	Lowest	41.4	40.7	43.9	43.0	49.4	47.4	41.9	42.9	46.7	40.2
	Mean highest	78.5	80.0	79.0	79.5	82.4	77.3	79.5	77.8	78.5	77.6
	Mean lowest	54.2	55.2	56.1	54.2	59 8	57.3	53.6	54.8	56 8	52.2
	Monthly mean	63.89	67.00	68.42	67.86	70 50	67.34	66.27	66.22	68.01	63.93
August	Highest	86.3	91.0	89.4	90.0	92.8	87.0	90.1	88.4	89.0	89.0
	Lowest	40.6	39.6	39.8	40.8	47.1	46.1	38.4	39.6	42.5	37.8
	Mean highest	73.4	77.0	76.7	77.6	80.2	75.1	76.9	75.5	75.6	74.7
	Mean lowest	53.8	53.8	53.7	52.2	58.6	56.3	52.1	53.0	54.2	50.3
	Monthly mean	62.67	65.17	66.59	65.21	68.64	65.46	63.78	63.60	65.18	60.53
September	Highest	85.1	87.2	85.3	86.6	89.3	82.6	86.0	83.3	83.4	84.1
	Lowest	32.9	32.4	32.2	31.1	37.1	37.3	30.5	31.6	31.9	29.4
	Mean highest	68.2	70.9	70.5	70.6	74.0	68.3	69.6	68.9	68.1	67.7
	Mean lowest	48.5	49.1	49.3	46.4	53.4	49.9	45.5	46.5	46.8	43.0
	Monthly mean	57.00	60.21	60.40	59.08	61.73	59.09	56.71	56.98	57.43	52 83
October	Highest	73.0	75.4	73.6	73.9	74.1	70.2	72.9	71 5	69.2	72.0
	Lowest	23.7	23.2	23.5	22.8	26.8	26.0	19.5	21.1	22.4	17.8
	Mean highest	55.1	56.0	55.9	55.7	59.8	54.4	54.2	54.8	52.4	52.0
	Mean lowest	38.4	38.9	37.5	35.8	41.2	39.0	34.9	36.3	35.1	32.5
	Monthly mean	45.50	47.48	47.20	46.23	48.68	46.93	43.63	44.64	44.10	40.69
November	Highest	61.3	63.7	62.3	62.2	65.3	58.6	59.9	59.9	57.9	56.3
	Lowest	12.1	12 3	11.5	8.9	16.2	13.3	3.3	5.2	4.3	1.3
	Mean highest	42.7	42.4	43.4	42.4	46.0	42.6	40.1	40.6	38.3	36.7
	Mean lowest	29.4	30.0	29.0	27.0	32.0	30.1	25.3	25.2	24.7	21.5
	Monthly mean	35.18	36.19	36.60	35.47	38.82	36.51	32.39	32.12	31.90	28.52
December	Highest	50.7	50.1	51.3	49.1	54.4	47.4	45 2	45.8	42.6	42.4
	Lowest	-1.4	-2.6	-3.2	-4.7	2.4	-2.0	-14.2	-13.8	17.0	-24.7
	Mean highest	32.6	32.5	33.9	32.7	37.2	33.8	29.3	29.8	25.1	24.7
	Mean lowest	20.7	20.9	20.3	17.8	24.2	20.9	13.5	13.8	8.8	5.1
	Monthly mean	27.03	26.90	27.28	26.31	30.49	27.77	21.95	22.49	17.60	14.63
	Annual mean	41.96	44.23	45.37	44.11	46.57	44.19	41.26	40.98	40.84	36.8

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TABLE III. Monthly summary of bright sunshine at the principal stations in Ontario in 1895, showing the number of hours the sun was above the horizon, the hours of registered sunshine, the total for the year, and the average derived from the fourteen years 1882-95.

Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total for the year.
	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.
Hours of sun above horizon.	285.7	291.4	369.9	406.4	461.1	465.7	470.9	434.5	376.3	340.2	286.9	274.3	4463.3
WOODSTOCK. 1895 ..	65.0	107.4	145.5	193.2	267.6	296.9	241.7	236.7	191.2	156.3	84.6	53.9	2040.0
WOODSTOCK. 1882-95	60.6	83.9	131.9	184.0	202.3	241.4	274.2	232.4	184.4	127.5	69.3	56.1	1848.0
TORONTO. 1895 ..	83.6	119.0	199.1	200.1	261.4	285.5	242.3	236.5	208.9	162.9	93.8	57.6	2150.7
TORONTO. 1882-95	78.5	100.5	155.9	197.6	216.8	259.2	283.3	248.2	216.4	143.5	78.6	59.6	2038.1
BARRIE. 1895 ..	63.3	96.0	175.9	190.7	250.4	281.2	221.5	214.8	182.6	133.4	63.2	35.9	1908.9
BARRIE. 1882-95	54.1	73.3	135.2	176.9	198.2	227.1	259.1	215.5	165.0	107.6	48.3	39 3	1699.6
LINDSAY.. 1895 ..	83.1	113.2	179.3	199.5	246.0	280.6	205.1	199.6	193.4	124.7	66.5	50.7	1941.7
LINDSAY.. 1882-95	74.2	100.2	161.5	204.9	214.1	255.3	275.0	246.0	202.8	134.4	69.8	56.8	1995.0
KINGSTON. 1895	70.0	115.1	198.4	192.1	235.2	287.4	251.5	252.5	194.6	167.8	88.3	87.5	2140.4
KINGSTON. 1882-95	70.7	103.2	161.6	195.1	216.4	246.2	269.7	244.5	197.1	133.8	77.6	70.1	1986.0
Average of five stations. 1895 ..	73.0	110.2	179.6	195.1	252.1	286.3	232.4	228.0	194.2	149.0	79.3	57.1	2036.3
Average of five stations. 1894 ..	74.5	124.2	127.5	212.9	181.7	244.6	276.2	207.3	156.4	129.4	64.7	65.5	1864.9
Average of five stations. 1882-95	67.6	92.2	149.2	191.7	209.6	245.8	272.3	237.3	193.1	129.4	68.7	56.4	1913.3

TABLE IV. Monthly summary of inches of rain and snow precipitation in the several districts of Ontario in 1895. Also the average derived from the fourteen years 1882-95.

Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total for the year.
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
West and Southwest.													
Rain 1895	0.90	0.13	0.45	1.63	2.35	1.19	2.04	2.49	2.98	2.80	1.63	2.70	21.29
Rain 1882-95..	1.18	1.56	1.17	1.79	3.46	3.16	2.40	2.57	2.56	2.81	2.39	1.69	26.74
Snow 1895	26.6	10.0	9.7	0.1	*	....	....	....	....	1.8	3.8	11.1	63.1
Snow 1882 95..	16.91	11.71	9.51	2.95	0.06	....	....	....	....	0.30	7.04	13.16	61.64
Northwest and North.													
Rain 1895	0.31	0.09	0.21	1.30	2.24	1 86	1.56	3.32	2.36	3.46	1.77	1.57	20.05
Rain 1882-95..	0.92	0.62	0.76	1.41	2.60	2.76	2.51	2.75	2.99	2.88	2.04	1.16	23.42
Snow 1895	40.9	18.9	11.5	1.9	*	....	....	....	....	10.8	15.2	21.5	120.7
Snow 1882-95..	28 43	21.31	13.83	3.95	0.47	...	....	....	....	1.83	14.24	21.13	105.19
Centre.													
Rain 1895	1.34	0.09	0.77	1.77	2.18	1.09	2.28	2.61	2.89	2.41	3.74	1.75	22.92
Rain 1882-95..	1.22	1.18	1.11	1.61	3.01	3.00	2.34	2.54	2.59	2.40	2.38	1.51	24.89
Snow 1895	28.2	8.0	8.5	0.3	....	....	....	.. .	....	4.1	3.9	10.8	63.8
Snow 1882-95..	18.92	13.59	9.16	3.21	0.08	....	....	....	....	0.51	5.74	11.17	62.38
East and Northeast.													
Rain 1895	0.52	0.03	0.21	1.27	2.66	1.35	2.21	2.84	2.43	3.07	2.73	2.37	22.19
Rain 1882-95..	0.94	0.69	0.89	1.37	2.76	2.81	2.84	2.85	2.54	2.22	2.01	1.18	23.10
Snow 1895	29.5	11.3	13.5	1.7	....	....	....	....	....	3.5	7.8	9.5	76.8
Snow 1882-95..	22.34	17.94	13.07	4.14	0.20	....	....	....	....	0.61	8.76	14.34	81.40
The Province.													
Rain 1895	0.78	0.08	0.41	1.49	2.36	1.37	2.02	2.81	2.67	2.93	2.47	2.22	21.61
Rain 1882-95..	1.06	1.01	0.98	1.55	2.96	2.93	2.52	2.68	2.67	2.58	2.21	1.39	24.54
Snow 1895	31.3	12.0	10.8	1.0	*	....	....	....	....	5.1	7.7	13.2	81.1
Snow 1882-95..	21.65	16.14	11.39	3.56	0.20	....	....	....	....	0.81	8.95	14.95	77.65

* Not measurable.

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TABLE V. Summary of the total fall of rain and snow, and of the number of days on which rain or snow fell in Ontario during the years 1894 and 1895 at stations reporting for the whole year and the average for the province.

Station.	Observer.	Rain.				Snow.			
		1894.		1895.		1894.		1895.	
		Inches.	Days	Inches.	Days.	Inches.	Days.	Inches.	Days.
ESSEX :									
Cottam	S. G. Brooker	23.42	81	22.31	88	32.5	25	42.6	26
Pelee Island	J. Quick	24.97	48	18.99	45	24.0	6	85.5	17
KENT :									
Blenheim	W. R. Fellows	27.75	57	30.99	69	32.0	25	59.0	30
Dealtown	S. J. Pardo	25.50	81	24.22	73	14.3	17	23.6	21
Chatham	R. C. Burt	22.42	84	19.59	71	35.1	22	51.5	29
ELGIN :									
Cowal	S. Maccoll	26.77	47	24.62	68	16.1	24	48.0	22
Port Stanley	M. Payne	25.75	147	23.11	123	47.9	67	74.2	76
NORFOLK :									
Port Dover	J. L. Morgan	26.85	127	20.88	99	62.3	45	83.8	64
HALDIMAND :									
DeCewsville	R. E. King	26.07	104	23.14	92	46.5	50	53.1	61
WELLAND :									
Welland	J. A. Gilchreese	28.64	96	25.86	92	90.0	29	73.5	34
Thorold	Z. W. Durkee	26.46	101	22.34	81	44.8	22	52.2	28
LAMBTON :									
Sarnia	Wm. Mowbray	22.82	53	20.06	57	20.5	14	53.5	22
The Ilford	Martin Wattson	23.12	81	25.65	71	61.0	27	66.0	27
Birnam	J. S. Mellor	25.41	99	24.61	83	45.4	25	87.4	41
Wyoming	J. Osborne	26.01	72	21.67	63	39.0	19	50.0	23
HURON :									
Goderich, L. H.	R. Campbell	7.92	49	7.64	41	62.5	28	100.3	36
Sunshine	G. Hood	26.12	85	21.57	69	63.4	60	101.7	51
BRUCE :									
Lucknow	M. Macdonald	27.92	111	21.87	79	76.2	58	127.9	88
North Bruce	J. B. Muir	21.59	103	17.08	84	62 5	44	113.7	71
Point Clark	J. Kay	22.33	53	19.70	38	57.0	26	117.0	28
Saugeen	Mrs. J. R. Stewart	18.79	140	14.84	97	93.7	80	181.1	99
GREY :									
Bognor	C. Baxter	22.97	102	16.27	77	95.5	63	171.7	71
Owen Sound	D. Mackenzie	23.85	131	19.44	89	94.3	62	160.8	74
Durham	J. Gunn, M.D.	21.35	107	16.26	83	138.0	60	188.5	70
Presque Isle	J. McKenzie	23.96	108	23.33	76	126.2	56	181.5	64
SIMCOE :									
Barrie	W. H. Buttery	21.80	104	23.50	85	106.0	78	141.5	81
Coldwater	J. B. Lazonby	23.90	96	19.26	79	115.4	65	150.6	61
Orillia	H. A. Fitton	25.21	120	18.28	90	85.0	66	114.5	78
MIDDLESEX :									
Coldstream	Daniel Zavitz	23.63	105	24.14	92	50.2	33	73.2	34
London	J. S. Dewar	30.14	140	28.89	114	43.4	62	59.1	57
Wilton Grove	H. Anderson	22.16	53	21.87	55	24.0	18	41.0	21
OXFORD :									
Princeton	D. Beamer	23.99	82	18.83	70	42.8	18	63.0	39
Woodstock	J. I. Bates, M.A	25.85	103	23.48	90	30.0	48	62.3	59
BRANT :									
Paris	John Kay	27.00	87	22.41	80	41.0	17	55.3	26
St. George	Dr. Kitchen	25.62	87	20.39	70	39.2	26	64.4	22
PERTH :									
St. Marys	J. Thomson	21 95	97	23.83	98	53 0	26	71.0	44
Stratford	Wm. Dick	23.20	120	24.28	96	50.1	55	89.9	60
WELLINGTON :									
Mount Forest	W. E. Brooks	24.12	115	19.84	83	89.8	57	122.2	74
DUFFERIN :									
Orangeville	N. Gordon	22.78	51	25.89	60	49.1	20	118.3	34

TABLE V. THE WEATHER.—*Concluded.*

Station.	Observer.	Rain.				Snow.			
		1894.		1895.		1894.		1895.	
		Inches.	Days.	Inches.	Days.	Inches.	Days.	Inches.	Days.
WENTWORTH :									
Stony Creek.....	C. F. Van Wagner.	28.45	82	29.50	84	42.9	23	58.7	34
HALTON :									
Georgetown	J. Barber, jr	22.74	145	22 54	120	58.7	52	74.7	77
YORK :									
Aurora	Rev. R. W. Amos .	28.03	82	18.99	79	48.7	26	64.9	47
Scarborough.....	R. Martin.....	23.39	113	24.31	95	22.5	38	43.2	42
Deer Park.....	J. Reeve	22.54	76	22.80	98	20.7	19	40.0	45
Toronto	Observatory	25.79	144	22.53	101	37.8	53	54.8	48
PEEL :									
Alton	W. J. Dods.	23.43	138	23.67	88	60.1	51	74.8	48
LEN'X & ADDINGTON									
Denbigh	J. Lane.....	18.75	51	18.95	45	66.5	25	103.6	34
FRONTENAC :									
Kingston.....	A. P. Knight, M.A.	23.78	130	20.30	113	57.5	59	57.3	77
CARLETON :									
Ottawa.....	W. T. Ellis.....	23.74	106	24.37	98	70.0	59	80.4	48
RENFREW :									
Clontarf.....	A. Schultz	29.36	106	20.66	87	70.7	47	92.0	63
Rockliffe	C. McIntyre... ...	21.34	94	19.00	91	84.8	47	89.2	62
Renfrew.....	Howard Wright...	13.20	19	9.13	16	15.5	17	45.7	32
LANARK :									
Oliver's Ferry ...	W. J. McLean	17.66	62	22.96	59	32.0	14	43.3	15
VICTORIA :									
Lindsay.....	Thomas Beall.....	24.48	116	17.25	87	72.3	63	102.5	61
PETERBOROUGH :									
Ennismore	J. N. Telford.....	24.55	55	19.40	48	41.0	22	60.0	22
Peterborough.....	T. Telford.....	26.83	112	20.18	72	56.5	29	71.2	29
Lakefield.....	H. A. Lempriere ..	18.91	86	22.77	90	45.3	23	77.5	39
HALIBURTON :									
Haliburton ...	C. R. Stewart	21.02	100	22.81	84	52.3	50	73.3	67
HASTINGS :									
Bancroft	J. Cleak.....	18.20	65	22.11	62	83.8	41	129.8	53
Deseronto	J. Russell.....	26.35	98	30.76	100	47.4	34	71.6	37
MUSKOKA :									
Bala	E. B. Sutton	27.95	105	20.12	79	75.8	51	123.6	72
Beatrice.....	J. Hollingworth...	26.63	98	19.87	77	88.0	47	151.6	63
Gravenhurst.....	T. M. Robinson....	23.17	103	20.66	97	61.1	50	110.3	62
Burk's Falls.....	G. Whelpton	27.95	82	17.44	55	84.0	45	121.0	48
Huntsville	C. A. Wattson	28.90	68	16.76	62	43.0	26	113.5	41
PARRY SOUND :									
Parry Sound	Rev. R. Mosely....	27.99	122	17.79	96	114.0	79	203.5	97
Sprucedale	A. Kirkam	28.08	82	17.83	69	72.0	38	135.0	53
Uplands	P. Macdonald	32.72	106	24.51	81	129.7	66	168.0	82
ALGOMA :									
Port Arthur.....	W. P. Cook	18.00	93	18.03	89	45.2	47	44.4	44
Savanne.....	Agent C. P. R.....	16.75	55	21.71	47	62.5	89	72.0	43
White River	Agent C. P. R.....	18.37	97	16.64	92	55.1	101	94.4	105
Thompson.....	Thomas Baker.....	21.33	46	20.17	39	36.5	20	63.0	46
Average for the province		23.89	92	21.22	79	59.0	41	90.0	50

THE WEATHER.

TABLE VI. Comparative Meteorological Register for the seven years 1889-95, as recorded at Toronto Observatory, in Latitude 43° 39.4' N, and Longitude 5h. 17m. 34.65s. W.

Register.	1895.	1894.	1893.	1892.	1891.	1890.	1889.
	°	°	°	°	°	°	°
Average temperature	44.28	46.75	43.53	44.61	45.87	45.02	45.44
Difference from average (55 years)	+ 0.08	+ 2.55	− 0.67	+ 0.41	+ 1.67	+ 0.82	+ 1.24
Thermic anomaly (lat. 43° 40')	− 6.74	− 4.27	− 7.49	− 6.41	− 5.15	− 6.00	− 5.58
Highest temperature	93.4	90.7	93.3	93.5	91.9	89.4	88.7
Lowest temperature	−21.2	− 9.9	−17.8	−10.2	− 2.0	− 2.7	−11.3
Annual ranges	114.6	100.6	111.1	103.7	93.9	92.1	100.0
Average daily range	17.26	16.27	17.15	15.58	16.45	16.22	15.55
Greatest daily range	36.9	34.3	36.3	38.6	37.8	36.0	42.8
Average height of bar. at 32° Fah	29.6171	29.6246	29.5996	29.6325	29.6385	29.6313	29.6177
Difference from average (54 years)	−0.0019	+0.0056	−0.0194	+0.0135	+0.0195	+0.0123	−0.0013
Highest barometer	30.240	30.516	30.467	30.356	30.268	30.334	30.365
Lowest barometer	28.746	29.035	28.227	28.846	28.536	28.762	28.582
Monthly and annual ranges	1.494	1.481	2.240	1.510	1.730	1.572	1.783
Average humidity of the air	75	76	77	77	75	78	77
Difference from average	− 2	− 1	0	0	− 2	+ 1	0
Average elasticity of aqueous vapour	0.253	0.277	0.262	0.272	0.267	0.272	0.271
" temperature of Dew Point	41.3	42.9	41.5	42.5	42.0	42.5	42.4
Average of cloudiness	0.57	0.60	0.59	0 61	0.59	0.62	0.63
Difference from average (41 years)	− 0.04	− 0.01	− 0.02	0.00	− 0.02	+ 0.01	+ 0.02
	°	°	°	°	°	°	°
Resultant direction of wind	S 78 W	N 78 W	N 66 W	N 54 W	N 57 W	N 48 W	N 63 W
" velocity of wind	1.36	1.10	1.95	1.81	1.63	1.80	2.04
Average velocity (miles per hour)	5.60	5.67	8.59	8.17	7.33	9.19	9.08
Total amount of rain in inches	22.531	25.785	31.145	25.285	26.735	32.110	24.575
Difference from average (55 years)	− 4.873	− 1.619	+ 3.741	− 2.119	− 0.669	+ 4.706	− 2.829
Number of days of rain	101	114	105	119	108	119	104
Total amount of snow in inches	54.8	37.8	85.7	42.2	47.8	52.6	66.5
Difference from average (55 years)	−13.74	−30.74	+17.16	−26.34	−20.74	−15.94	− 2.04
Number of days of snow	48	32	64	43	50	52	45
Number of fair days	196	179	156	165	193	159	187
Number of days completely clouded	48	43	50	57	60	68	79
Number of auroras observed	11	23	18	33	18	7	6
Possible to see aurora (No. of nights)	195	199	208	195	212	186	169
Number of thunder storms	23	36	41	40	19	21	24
Number of fogs	33	30	31	36	38	43	34
Number of hours of bright sunshine	2150.7	2017.7	2052.4	2054.4	2065.4	1977.6	1909.2
Number of hours of possible sunshine	4463.3	4463.3	4463.3	4474.4	4463.3	4463.3	4463.3

RURAL AREA.

TABLE VII. Showing by County Municipalities and groups of Counties the Rural Area of Ontario as returned by Municipal Assessors for 1895.

Counties.	Acres of assessed land.			Acres cleared.		Acres woodland.	Acres swamp or marsh.	Per cent. cleared.
	Resident.	Non-resident.	Total occupied.	1895.	1894.			
Essex	421,302	9,601	430,903	245,736	242,241	171,954	13,213	57.0
Kent	554,503	11,182	565,685	348,458	336,729	193,617	23,610	61.6
Elgin	435,735	801	436,536	308,706	305,657	118,733	9,097	70.7
Nortolk	390,993	5,022	396,015	242,205	238,867	123,765	30,045	61.2
Haldimand	278,295	2,215	280,510	214,234	214,365	59,867	6,409	76.4
Welland	222,606	3,833	226,439	174,042	174,372	39,510	12,887	76.9
Totals	2,303,434	32,654	2,336,088	1,533,381	1,512,231	707,446	95,261	65.6
Lambton	638,677	21,365	660,042	352,305	342,535	251,688	56,049	53.4
Huron	784,676	14,162	798,838	591,976	586,940	113,508	93,354	74.1
Bruce	824,840	28,682	853,522	495,419	491,014	242,669	115,434	58.0
Totals	2,248,193	64,209	2,312,402	1,439,700	1,420,489	607,865	264,837	62.3
Grey	1,050,464	11,953	1,062,417	615,244	599,705	265,812	181,361	57.9
Simcoe	929,981	37,063	967,044	534,371	523,377	331,401	101,272	55.3
Totals	1,980,445	49,016	2,029,461	1,149,615	1,123,082	597,213	282,633	56.6
Middlesex	751,895	5,631	757,526	555,090	551,536	190,848	11,588	73.3
Oxford	470,980	868	471,848	362,708	358,526	76,739	32,401	76.9
Brant	213,661	2,214	215,875	179,913	178,350	14,577	21,385	83.3
Perth	512,205	6,276	518,481	402,334	393,502	67,420	48,727	77.6
Wellington	625,676	2,445	628,121	458,388	455,642	78,569	91,164	73.0
Waterloo	301,391	4,675	306,066	243,237	242,716	44,259	18,570	79.5
Dufferin	349,854	5,807	355,661	213,733	208,459	60,452	81,476	60.1
Totals	3,225,662	27,916	3,253,578	2,415,403	2,388,731	532,864	305,311	74.2
Lincoln	183,690	7,830	191,520	159,607	155,121	30,221	1,692	83.3
Wentworth	271,218	1,060	272,278	209,599	207,774	39,458	23,221	77.0
Halton	220,720	4,113	224,833	168,423	167,935	35,733	20,677	74.9
Peel	288,077	257	288,334	246,312	243,865	27,728	14,294	85.4
York	528,767	6,004	534,771	421,850	423,916	58,897	54,024	78.9
Ontario	488,072	12,041	500,113	350,096	346,985	72,561	77,456	70.0
Durham	367,753	2,515	370,268	288,653	289,165	49,312	32,303	78.0
Northumberland	433,419	2,144	435,563	330,563	335,124	74,228	30,772	75.9
Prince Edward	224,466	5,888	230,354	187,253	187,892	27,400	15,701	81.3
Totals	3,006,182	41,852	3,048,034	2,362,356	2,357,777	415,538	270,140	77.5
Lennox & Addington	410,658	14,083	424,741	216,855	214,165	111,699	96,187	51.1
Frontenac	602,944	77,899	680,843	225,943	218,715	288,164	166,736	33.2
Leeds	463,171	6,701	469,872	265,137	273,011	124,956	79,779	56.4
Grenville	270,421	1,087	271,508	165,210	163,658	70,020	36,278	60.8
Dundas	235,694	1,250	236,944	140,124	137,698	61,246	35,574	59.1
Stormont	248,147	2,089	250,236	128,394	126,078	100,950	20,892	51.3
Glengarry	288,051	.....	288,051	159,761	158,207	109,191	19,099	55.5
Prescott	268,028	18,744	286,772	150,947	150,164	125,733	10,092	52.6
Russell	237,831	13,456	251,287	83,330	82,113	167,387	570	33.2
Carleton	555,435	9,513	564,948	304,018	302,167	125,014	135,866	53.8
Renfrew	906,948	29,406	936,354	289,975	289,038	508,911	137,468	31.0
Lanark	648,409	22,567	670,976	300,988	298,405	217,278	152,710	44.9
Totals	5,135,737	196,795	5,332,532	2,430,732	2,413,419	2,010,549	891,251	45.6
Victoria	569,145	16,154	585,299	259,629	258,187	140,020	185,650	44.4
Peterborough	536,204	22,410	558,614	233,456	229,594	233,579	91,579	41.8
Haliburton	550,177	12,327	562,504	34,635	33,734	491,618	36,251	6.2
Hastings	893,781	96,479	990,260	370,069	369,000	451,535	168,656	37.4
Totals	2,549,307	147,370	2,696,677	897,789	890,515	1,316,752	482,136	33.3
Muskoka	478,878	51,935	530,813	55,923	55,983	388,238	86,652	10.5
Parry Sound	456,668	51,297	507,965	55,683	52,736	385,550	66,732	11.0
Nipissing	169,292	70,473	239,765	19,227	16,089	176,405	44,133	8.0
*Algoma	578,097	247,903	826,000	67,183	61,558	639,031	119,786	8.1
Totals	1,682,935	421,608	2,104,543	198,016	186,366	1,589,224	317,303	9.4
The Province. 1895	22,131,895	981,420	23,113,315	12,426,992	.....	7,777,451	2,908,872	53.8
1894	22,032,799	1,006,175	23,038,974	.....	12,292,610	7,859,714	2,886,650	53.4

*Including Manitoulin, Thunder Bay and Rainy River.

AREA AND PRODUCE—FALL WHEAT.

TABLE VIII. Showing by County Municipalities and groups of Counties the area and produce of Fall Wheat in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95; also the yield per acre.

Counties.	1895.			1894.			Yearly average for the fourteen years 1882-95.		
	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.
Essex	24,522	556,649	22.7	25,358	438,693	17.3	32,160	625,851	19.5
Kent	52,736	1,038,899	19.7	56,059	1,154,815	20.6	60,113	1,210,922	20.1
Elgin	26,425	644,723	17.7	37,754	762,631	20.2	43,258	875,743	20.2
Norfolk	32,777	337,603	10.3	34,699	603,763	17.4	34,081	623,554	18.3
Haldimand	33,994	499,712	14.7	35,305	702,570	19.9	33,778	566,838	16.8
Welland	17,392	245,227	14.1	17,661	313,922	18.4	21,699	354,864	16.4
Totals	197,846	3,322,813	16.8	206,236	3,976,394	19.3	225,089	4,257,772	18.9
Lambton	38,172	790,160	20.7	34,137	655,430	19.2	36,871	724,556	19.7
Huron	42,619	971,713	22.8	44,607	1,025,961	23.0	60,495	1,253,328	20.7
Bruce	27,400	515,120	18.8	27,981	601,592	21.5	41,920	829,756	19.8
Totals	108,191	2,276,993	21.0	106,725	2,282,983	21 4	139,286	2,807,640	20.2
Grey	18,563	356,410	19.2	16,054	369,242	23.0	23,853	471,592	19.8
Simcoe	43,731	1,246,334	28.5	47,760	1,055,496	22.1	52,619	1,129,105	21.5
Totals	62,294	1,602,744	25.7	63,814	1,424,738	22.3	76,472	1,600,697	20.9
Middlesex	61,269	1,347,918	22.0	59,124	1,135,181	19.2	71,192	1,474,492	20.7
Oxford	36,857	589,712	16.0	41,508	929,779	22.4	39,538	830,292	21.0
Brant	22,700	261,050	11.5	27,894	663,877	23.8	28,407	550,478	19.4
Perth	34,501	755,572	21.9	33,458	782,917	23.4	41,347	868,792	21.0
Wellington	11,878	210,241	17.7	11,851	284,424	24.0	20,738	424,286	20.5
Waterloo	34,346	518,625	15.1	35,381	820,839	23.2	38,388	813,744	21.2
Dufferin	4,883	99,077	20.5	4,259	101,790	23.9	8,188	161,465	19.7
Totals	206,384	3,782,195	18.3	213,475	4,718,807	22.1	247,798	5,123,549	20.7
Lincoln	16,324	280,773	17.2	16,973	337,763	19.9	20,858	382,803	18.4
Wentworth	28,525	439,285	15.4	27,580	615,034	22.3	29,477	568,019	19.3
Halton	22,287	398,937	17.9	21,646	534,656	24.7	21,550	434,884	20.2
Peel	21,731	388,985	17.9	23,354	576,844	24.7	24,864	533,660	21.5
York	26,349	566,504	21.5	30,261	708,107	23.4	34,259	760,484	22.2
Ontario	7,729	168,492	21.8	8,338	175,098	21.0	8,368	183,877	22.0
Durham	5,651	115,846	20.5	6,023	122,267	20.3	4,261	87,316	20 5
Northumberland	10,146	212,051	20.9	15,704	293,665	18.7	12,447	247,181	19.9
Prince Edward	3,274	66,462	20.3	6,062	98,811	16.3	3,452	61,569	17.8
Totals	142,016	2,637,335	18.6	155,941	3,462,245	22 2	159,536	3,259,793	20.4
Lennox and Addington	2,677	51,398	19.2	4,096	84,378	20.6	2,671	49,345	18.5
Frontenac	592	13,557	22.9	570	10,431	18.3	1,326	24,907	18.8
Leeds	2,020	44,642	22.1	2,769	50,119	18.1	4,104	75,765	18.5
Grenville	28	560	20.0	85	1,700	20.0			
Dundas	229	6,298	27.5	240	4,680	19.5	802	15,176	18.9
Stormont	246	4,920	20.0	76	1,345	17.7	443	8,154	18.4
Glengarry	60	1,554	25.9	85	1,445	17.0	398	6,678	16.8
Prescott	23	587	25.5	35	700	20.0	59	797	13.5
Russell	24	679	28.3	41	820	20.0	145	2,612	18.0
Carleton	152	3,557	23.4	377	7,540	20.0	1,028	16,266	15.8
Renfrew	285	5,810	20.7	373	8,057	21.6	702	12,885	18.4
Lanark	1,729	43,744	25.3	2,038	43,002	21.1	2,584	50,281	19.5
Totals	8,065	177,306	22.0	10,785	214,217	19.9	14,262	262,866	18.4
Victoria	3,785	84,784	22.4	3,478	69,908	20.1	6,232	124,354	20.0
Peterborough	6,138	113,563	18.5	7,393	154,514	20.9	8,928	173,184	19.4
Haliburton	113	2,147	19.0	125	1,688	13 5	124	2,001	16.1
Hastings	7,712	141,901	18.4	10,178	192,364	18.9	9,609	183,066	19.1
Totals	17,748	342,385	19.3	21,174	418,474	19.8	24,893	482,605	19.4
Muskoka	17	255	15.0	23	269	11.7	50	848	17.0
Parry Sound	38	733	19.3	159	2,321	14.6	58	930	16.0
Nipissing	19	280	20.0	32	480	15.0	6	101	16.8
Algoma	581	12,143	20 9	628	11,178	17.8	488	10,162	20.8
Totals	655	13,511	20 6	842	14,248	16.9	602	12,041	20.0
The Province	743,199	14,155,282	19.0	778,992	16,512,106	21.2	887,938	17,806,963	20.1

AREA AND PRODUCE—SPRING WHEAT.

TABLE IX. Showing by County Municipalities and groups of Counties the area and produce of Spring Wheat in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95; also the yield per acre.

Counties.	1895.			1894.			Yearly average for the fourteen years 1882-95.		
	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.
Essex	300	5,250	17.5	308	4,035	13.1	1,377	20,402	14.8
Kent	713	11,978	16.8	306	4,345	14.2	3,036	46,812	15.4
Elgin	92	1,334	14.5	343	5,557	16.2	1,260	19,604	15.6
Norfolk	20	246	12.3	11	110	10.0	689	9,711	14.1
Haldimand	419	4,819	11.5	826	9,664	11.7	2,916	37,114	12.7
Welland	142	1,136	8.0	343	4,047	11.8	1,023	13,953	13.6
Totals	1,686	24,763	14.7	2,137	27,758	13.0	10,301	147,596	14.3
Lambton	1,072	14,686	13.7	552	7,618	13.8	5,145	74,222	14.4
Huron	2,630	42,343	16.1	2,725	39,240	14.4	13,696	194,150	14.2
Bruce	4,166	68,322	16.4	4,534	70,277	15.5	12,014	170,899	14.2
Totals	7,868	125,351	15.9	7,811	117,135	15.0	30,855	439,271	14.2
Grey	11,191	173,461	15.5	8,923	144,553	16.2	32,091	454,927	14.2
Simcoe	11,783	203,846	17.3	13,504	212,013	15.7	30,889	467,089	15.1
Totals	22,974	377,307	16.4	22,427	356,566	15.9	62,980	922,016	14.6
Middlesex	539	9,433	17.5	792	12,118	15.3	7,699	116,882	15.2
Oxford	963	14,252	14.8	469	7,270	15.5	6,929	111,648	16.1
Brant	94	1,053	11.2	.....	.....	.....	1,053	14,516	13.8
Perth	2,495	50,399	20.2	2,382	35,254	14.8	10,259	156,008	15.2
Wellington	15,001	249,017	16.6	12,840	218,280	17.0	20,516	315,691	15.4
Waterloo	445	7,743	17.4	502	10,391	20.7	4,016	60,252	15.0
Dufferin	11,661	211,064	18.1	8,042	160,036	19.9	19,392	287,163	14.8
Totals	31,198	542,961	17.4	25,027	443,349	17.7	69,864	1,062,160	15.2
Lincoln	414	7,162	17.3	169	1,555	9.2	1,778	24,771	13.9
Wentworth	396	4,356	11.0	73	869	11.9	2,420	35,369	14.6
Halton	707	8,555	12.1	1,024	11,366	11.1	3,732	54,025	14.5
Peel	4,604	72,283	15.7	4,507	62,647	13.9	12,917	207,883	16.1
York	12,397	189,674	15.3	9,575	137,880	14.4	23,541	388,010	16.5
Ontario	20,833	285,412	13.7	19,930	298,950	15.0	42,783	692,937	16.2
Durham	10,796	152,224	14.1	11,562	143,369	12.4	31,066	478,681	15.4
Northumberland	9,918	130,918	13.2	10,149	130,922	12.9	24,203	321,845	13.3
Prince Edward	1,547	20,420	13.2	1,700	24,140	14.2	5,409	72,424	13.4
Totals	61,612	871,004	14.1	58,689	811,698	13.8	147,849	2,275,945	15.4
Lennox and Addington	3,489	48,148	13.8	3,176	57,168	18.0	5,165	74,034	14.3
Frontenac	4,623	73,506	15.9	4,788	74,693	15.6	8,003	120,736	15.1
Leeds	3,852	60,091	15.6	4,240	67,416	15.9	11,547	182,086	15.8
Grenville	1,690	28,054	16.6	1,882	29,736	15.8			
Dundas	2,093	43,116	20.6	2,388	39,880	16.7	4,140	77,166	18.6
Stormont	1,499	30,430	20.3	2,392	30,139	12.6	4,068	71,139	17.5
Glengarry	3,828	66,607	17.4	5,399	63,708	11.8	7,279	117,621	16.2
Prescott	3,677	67,657	18.4	5,038	49,372	9.8	7,642	120,558	15.8
Russell	745	13,783	18.5	2,214	21,254	9.6	3,516	58,559	16.7
Carleton	9,612	171,094	17.8	15,017	213,241	14.2	20,702	365,347	17.6
Renfrew	20,660	338,824	16.4	23,208	317,950	13.7	24,427	401,901	16.5
Lanark	9,278	148,448	16.0	10,418	157,312	15.1	13,860	213,320	15.4
Totals	65,046	1,089,758	16.8	80,160	1,121,869	14.0	110,349	1,802,467	16.3
Victoria	11,519	167,026	14.5	12,664	202,624	16.0	29,284	425,083	14.5
Peterborough	11,081	115,242	10.4	9,316	122,971	13.2	23,597	307,098	13.0
Haliburton	865	10,380	12.0	938	9,474	10.1	1,350	17,403	12.9
Hastings	6,242	86,140	13.8	5,673	82,826	14.6	12,629	187,553	14.9
Totals	29,707	378,788	12.8	28,591	417,895	14.6	66,860	937,137	14.0
Muskoka	476	6,474	13.6	657	10,052	15.3	1,160	17,182	14.8
Parry Sound	300	4,230	14.1	538	6,617	12.3	1,170	18,129	15.5
Nipissing	358	7,375	20.6	517	6,101	11.8	151	2,477	16.4
Algoma	2,732	44,532	16.3	3,462	48,814	14.1	5,423	100,394	18.5
Totals	3,866	62,611	16.2	5,174	71,584	13.8	7,904	138,182	17.5
The Province	223,957	3,472,543	15.5	230,016	3,367,854	14.6	506,962	7,724,774	15.2

AREA AND PRODUCE—BARLEY.

TABLE X. Showing by County Municipalities and groups of Counties the area and produce of Barley in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95; also the yield per acre.

Counties.	1895.			1894.			Yearly average for the fourteen years 1882-95.		
	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.
Essex	3,824	112,426	29.4	4,604	115,100	25.0	3,570	92,393	25.9
Kent	8,870	291,823	32.9	8,797	242,797	27.6	7,104	194,425	27.4
Elgin	7,139	206,317	28.9	5,008	120,693	24.1	5,138	135,882	26.4
Norfolk	2,789	61,079	21.9	2,897	55,912	19.3	5,102	126,070	24.7
Haldimand	4,789	101,814	21.3	5,553	88,293	15.9	11,523	245,440	21.3
Welland	611	13,075	21.4	1,098	18,995	17.3	3,200	72,981	22.8
Totals	28,013	786,534	28.1	27,957	641,790	23.0	35,637	867,191	24.3
Lambton	11,274	351,749	31.2	10,962	277,339	25.3	13,510	340,818	25.2
Huron	22,321	622,756	27.9	18,437	473,831	25.7	24,723	675,192	27.3
Bruce	11,789	297,083	25.2	12,736	333,683	26.2	16,445	427,885	26.0
Totals	45,384	1,271,588	28.0	42,135	1,084,853	25.7	54,678	1,443,895	26.4
Grey	15,476	365,234	23.6	15,431	374,973	24.3	19,598	482,925	24.6
Simcoe	37,536	1,171,123	31.2	30,248	741,076	24.5	30,968	814,702	26.3
Totals	53,012	1,536,357	29.0	45,679	1,116,049	24.4	50,566	1,297,627	25.7
Middlesex	20,276	622,473	30.7	13,399	333,635	24.9	14,863	393,609	26.5
Oxford	12,578	369,793	29.4	11,328	287,731	25.4	15,280	445,424	29.2
Brant	10,999	200,182	18.2	10,951	229,971	21.0	16,773	430,254	25.7
Perth	17,151	555,692	32.4	12,816	319,118	24.9	16,150	473,797	29.3
Wellington	28,596	709,181	24.8	27,245	697,472	25.6	32,696	910,151	27.8
Waterloo	14,634	358,533	24.5	15,615	390,375	25.0	16,473	487,563	29.6
Dufferin	12,140	304,714	25.1	10,507	296,297	28.2	11,538	296,622	25.7
Totals	116,374	3,120,568	26.8	101,861	2,554,599	25.1	123,773	3,437,420	27.8
Lincoln	779	18,151	23.3	1,770	31,860	18.0	3,609	85,849	23.8
Wentworth	5,053	120,767	23.9	7,893	161,017	20.4	11,521	302,800	26.3
Halton	6,611	158,003	23.9	6,070	106,832	17.6	11,036	295,894	26.8
Peel	26,923	576,152	21.4	25,253	598,496	23.7	31,801	848,788	26.7
York	32,424	768,449	23.7	35,397	753,956	21.3	50,113	1,406,807	28.1
Ontario	23,785	573,219	24.1	24,118	472,713	19.6	34,164	930,326	27.2
Durham	25,002	542,543	21.7	31,317	569,969	18.2	41,052	1,051,442	25.6
Northumberland	11,575	224,555	19.4	16,502	277,234	16.8	36,230	790,644	21.8
Prince Edward	16,201	327,470	20.1	17,624	385,966	21.9	32,540	667,617	20.5
Totals	148,453	3,309,489	22.3	165,944	3,358,043	20.2	252,066	6,380,167	25.3
Lennox and Addington	12,871	287,023	22.3	15,815	377,979	23.9	30,199	661,857	21.9
Frontenac	3,723	82,851	22.2	5,770	122,324	21.2	13,549	307,574	22.7
Leeds	4,131	100,141	22.6	4,902	102,942	21.0	9,753	235,055	24.1
Grenville	2,805	63,112	22.5	2,672	61,326	23.3			
Dundas	2,198	61,104	27.8	2,917	69,425	23.8	5,412	154,478	28.5
Stormont	2,442	63,004	25.8	1,944	41,213	21.2	2,463	65,035	26.4
Glengarry	2,491	61,897	24.9	2,508	46,398	18.5	2,240	51,488	23.0
Prescott	2,365	65,038	27.5	2,899	52,182	18.0	3,212	81,771	25.5
Russell	1,580	48,501	31.7	2,111	29,976	14.2	1,690	41,095	24.3
Carleton	7,639	215,420	28.2	8,177	158,544	19.4	8,128	231,613	28.5
Renfrew	1,660	22,654	21.4	1,700	32,470	19.1	1,409	32,890	23.3
Lanark	2,697	73,898	27.4	2,550	59,415	23.3	2,909	74,385	25.6
Totals	46,062	1,144,473	24.8	53,925	1,154,284	21.4	80,964	1,937,211	23.9
Victoria	18,941	476,597	25.2	25,948	609,778	23.5	27,549	691,100	25.1
Peterborough	5,546	106,483	19.2	6,194	126,358	20.4	10,590	249,293	23.5
Haliburton	195	4,154	21.3	185	3,756	20.3	247	5,709	23.1
Hastings	13,710	278,313	20.3	13,244	267,529	20.2	30,578	686,505	22.5
Totals	38,392	865,547	22.6	45,571	1,007,421	22.1	68,964	1,632,607	23.7
Muskoka	766	16,622	21.7	933	18,307	19.3	625	13,149	21.0
Parry Sound	654	15,107	23.1	967	19,147	19.8	716	16,053	22.4
Nipissing	134	3,295	24.6	143	2,145	15.0	77	1,730	22.5
Algoma	832	20,962	25.2	1,146	24,066	21.0	741	19,009	25.7
Totals	2,386	55,991	23.5	3,189	63,365	19.9	2,159	49,941	23.1
The Province	478,046	12,090,707	25.3	486,261	10,980,404	22.6	668,897	17,046,059	25.5

AREA AND PRODUCE—OATS.

TABLE XI. Showing by County Municipalities and groups of Counties the area and produce of Oats in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95; also the yield per acre.

Counties.	1895.			1894.			Yearly average for the fourteen years 1882 95.		
	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.
Essex	48,316	2,203,210	45.6	44,578	1,546,857	34.7	34,325	1,276,417	37.2
Kent	45,903	1,964,648	42.8	45,237	1,741,625	38.5	35,743	1,402,246	39.2
Elgin	42,069	1,560,760	37.1	40,376	1,312,220	32.5	33,807	1,225,483	36.2
Norfolk	30.339	922,306	30.4	30,947	671,550	21.7	27,144	827,959	30.5
Haldimand	28,985	991,287	34.2	30,479	746,736	24.5	24,357	743,994	30.5
Welland	23,322	839,592	36.0	23,201	519,702	22.4	20,136	600,387	29.8
Totals	218,934	8,481,803	38.7	214,818	6,538,690	30.4	175,512	6,076,486	34.6
Lambton	70,133	3,085,852	44.0	63,332	2,298,952	36.3	46,400	1,654,708	35.7
Huron	129,998	5,134,921	39.5	106,402	3,670,869	34.5	86,962	3,229,446	37.1
Bruce	97,751	3,352,859	34.3	97,538	3,082,201	31.6	68,665	2,266,594	33.0
Totals	297,882	11,573,632	38.9	267,272	9,052,022	33.9	202,027	7,150,748	35.4
Grey	139,155	4,411,214	31.7	140,880	4,423,632	31.4	100,297	3,242,119	32.3
Simcoe	107,778	4,451,231	41.3	105,317	3,549,183	33.7	73,818	2,593,640	35.1
Totals	246,933	8,862,445	35.9	246,197	7,972,815	32.4	174,115	5,835,759	33.5
Middlesex	96,768	4,141,670	42.8	99,998	2,939,941	29.4	77,621	2,871,955	37.0
Oxford	71,525	2,953,983	41.3	72,164	2,439,143	33.8	56,520	2,159,593	38.2
Brant	22,897	718,966	31.4	23,755	660,389	27.8	19,166	656,139	34.2
Perth	95,651	4,246,904	44.4	88,638	2,863,007	32.3	64,779	2,619,093	40.4
Wellington	122,641	4,341,491	35.4	118,234	3,889,899	32.9	81,055	2,967,101	36.6
Waterloo	54,813	1,836,236	33.5	53,275	1,630,215	30.6	40,366	1,473 193	36.5
Dufferin	61,285	2,053,048	33.5	59,837	2,046,425	34.2	36,941	1,283,036	34.7
Totals	525,580	20,292,298	38.6	515,901	16,469,019	31.9	376,448	14,030,110	37.3
Lincoln	21,934	701,888	32.0	22,262	549,871	24.7	18,636	586,955	31.5
Wentworth	34,813	1,270,675	36.5	34,156	894,887	26.2	29,420	1,022,126	34.7
Halton	26,195	908,967	34.7	27,470	741,690	27.0	20,752	722,560	34.8
Peel	46,734	1,560,916	33.4	47,068	1,496,762	31.8	33,464	1,232,260	36.8
York	95,516	3,514,989	36.8	99,855	3,325,172	33.3	70,887	2,772,433	39.1
Ontario	75,160	2,750,856	36.6	76,395	2,184,897	28.6	55,092	2,046,708	37.2
Durham	48,581	1,685,761	34.7	53,844	1,459,172	27.1	37,519	1,295,519	34.5
Northumberland	44,792	1,312,406	29.3	42,474	1,078,840	25.4	32,971	964,226	29.2
Prince Edward	16,530	464,493	28.1	16,832	422,483	25.1	14,210	390,243	27.5
Totals	410,255	14,170,951	34.5	420,356	12,153,774	28.9	312,951	11,033,030	35.3
Lennox and Addington	30,733	808,278	26.3	30,180	872,202	28.9	23,912	669,375	28.0
Frontenac	37,820	1,070,306	28.3	36,364	952,737	36.2	30,054	853,232	28.4
Leeds	46,111	1,175,831	25.5	43,587	1,168,132	26.8			
Grenville	33,140	901,408	27.2	32,605	896,638	27.5	69,008	2,103,562	30.5
Dundas	31,145	1,071,388	34.4	34,180	987,802	28.9	30,524	1,060,264	34.7
Stormont	24,580	818,514	33.3	25,303	652,817	25.8	24,549	826,046	33.6
Glengarry	33,383	1,148,375	34.4	36,400	808,080	22.2	31,246	980,384	31.4
Prescott	32,475	1,117,140	34.4	32,829	607,337	18.5	28,039	850,211	30.3
Russell	21,907	865,327	39.5	21,027	485,724	23.1	19,084	604,168	31.7
Carleton	76,122	2,778,453	36.5	73,109	2,054,363	28.1	63,071	2,185,141	34.6
Renfrew	51,355	1,602,276	31.2	49,201	1,195,584	24.3	43,098	1,368,919	31.8
Lanark	43,573	1,546,842	35.5	47,304	1,343,434	28.4	39,892	1,267,392	31.8
Totals	462,344	14,904,138	32.2	462,089	12,024,850	26.0	402,477	12,768,694	31.7
Victoria	66,744	2,429,482	36.4	74,682	2,098,564	28.1	45,258	1,510,359	33.4
Peterborough	47,939	1,227,238	25 6	46,919	1,318,424	28.1	33,696	1,023,834	30.4
Haliburton	5,340	145,782	27.3	5,158	85,623	16.6	5,213	139,511	26.8
Hastings	55,295	1,487,436	26.9	54,986	1,534,109	27.9	44,841	1,303,655	29.1
Totals	175,318	5,289,938	30.2	181,745	5,036,720	27.7	129,008	3,977,359	30.8
Muskoka	10,754	337,676	31.4	10,594	244,721	23.1	9,552	277,034	29.0
Parry Sound	11,640	335,232	28.8	10,384	278,291	26.8	6,818	200,753	29.4
Nipissing	3,203	108,261	33.8	3,170	72,910	23.0	1,052	32,574	31.0
Algoma	10,466	341,192	32.6	10,240	328,704	32.1	6,200	211,645	34.1
Totals	36,063	1,122,361	31.1	34,388	924,626	26.8	23,622	722,006	30.6
The Province	2,373,309	84,697,566	35.7	2,342,766	70,172,516	30.0	1,796,160	61,594,192	34.3

AREA AND PRODUCE—RYE.

TABLE XII.—Showing by County Municipalities and groups of Counties the area and produce of Rye in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882 to 1895, and the yield per acre.

Counties.	1895.			1894.			Yearly average for the fourteen years 1882 to...		
	Acres.	Bushels.	Bushels per acre.	Acres.	Bushels.	Bushels per acre.	Acres.	Bushels.	Bushels per acre.
Essex	2,454	50,419	20 5	1,547	28,405	18 5	995	18,911	19 0
Kent	2,196	43,293	19 8	1,103	20,894	18 9	841	15,849	18 8
Elgin	3,746	65,605	17 4	2,561	41,296	16 0	1,629	30,331	18 4
Norfolk	18,196	198,460	10 9	9,782	95,473	9 8	7,874	94,504	12 0
Haldimand	960	13,440	14 0	747	10,457	13 9	746	11,940	16 0
Welland	1,547	25,073	16 2	1,134	18,243	16 0	792	11,484	14 5
Totals	29,220	394,927	13 5	16,886	196,978	11 6	13,287	182,819	13 7
Lambton	1,070	25,718	24 0	517	9,441	18 3	317	5,712	18 0
Huron	497	12,474	25 0	302	4,840	20 0	344	6,192	18 0
Bruce	768	13,826	18 0	500	8,000	16 0	487	8,347	17 1
Totals	2,335	52,018	22 3	1,319	22,281	16 9	1,148	20,251	17 6
Grey	580	7,946	13 7	1,161	15,746	13 6	526	10,004	19 0
Simcoe	2,879	50,403	17 4	3,220	50,464	15 8	2,232	39,978	17 9
Totals	3,459	57,789	16 9	4,371	66,220	15 2	2,668	49,982	17 3
Middlesex	3,160	61,343	19 4	961	14,397	14 9	720	13,150	18 3
Oxford	3,253	53,284	16 3	1,697	30,273	17 8	1,359	25,617	18 7
Brant	4,382	68,712	15 7	977	15,940	17 4	1,093	19,274	17 6
Perth	814	21,479	26 4	467	11,216	24 0	363	4,797	13 3
Wellington	2,750	42,900	15 6	1,289	18,479	14 4	1,197	17,895	14 9
Waterloo	2,279	38,543	16 9	1,161	20,896	18 0	649	10,345	17 9
Wellington	3,294	56,949	20 9	1,176	17,926	15 2	898	15,151	16 8
Totals	20,006	349,594	17 5	7,728	126,251	16 0	6,144	105,179	17 1
Lincoln	1,271	22,194	17 4	542	8,943	16 5	457	7,849	17 1
Wentworth	2,343	43,371	18 5	1,302	21,138	16 4	1,050	17,442	17 5
Halton	1,130	19,549	17 3	385	4,935	12 7	363	5,436	14 8
Peel	1,543	21,311	14 1	1,281	20,098	15 6	1,146	21,739	18 4
York	1,703	28,447	16 8	982	15,104	17 0	1,459	24,111	16 4
Ontario	3,070	52,469	17 0	3,302	54,342	17 3	2,577	44,673	17 3
Durham	6,491	117,884	18 2	5,254	65,949	12 6	4,441	69,814	15 8
Northumberland	11,473	141,180	12 3	10,307	171,457	16 6	10,947	145,402	13 3
Prince Edward	4,351	56,300	12 1	6,319	110,554	17 5	7,481	111,077	14 7
Totals	33,010	504,505	15 3	30,367	481,510	15 7	28,720	451,543	15 7
Lennox and Addington	3,570	42,840	12 0	3,096	46,377	15 0	4,062	60,930	15 0
Frontenac	1,625	25,675	15 8	2,253	33,443	14 8	3,161	47,704	15 0
Leeds	1,130	18,189	16 1	1,259	16,359	13 0	4,744	71,243	15 0
Grenville	2,442	44,695	18 3	530	8,474	16 0			
Dundas	987	21,364	21 6	753	14,570	19 3	1,111	24,791	22 3
Stormont	347	4,164	12 0	77	1,473	19 1	473	7,095	15 0
Glengarry	13	260	20 0	22	330	15 0	50	800	16 0
Prescott				118	1,768	15 0	344	5,676	16 5
Russell	111	2,109	19 0	138	2,760	20 0	177	3,187	18 0
Carleton	1,054	14,213	13 5	4,237	71,409	16 8	4,643	84,139	18 1
Renfrew	2,203	34,078	15 6	4,752	79,274	16 7	6,402	124,839	19 5
Lanark	2,660	36,790	13 8	1,250	14,750	11 8	3,772	61,240	16 1
Totals	16,225	243,374	15 0	18,644	304,978	16 3	28,940	491,644	17 0
Victoria	1,470	18,954	12 8	1,108	16,264	14 8	1,166	21,124	18 1
Peterborough	2,324	34,748	14 9	2,171	30,394	14 0	3,401	52,676	15 5
Haliburton	320	4,480	14 0	98	1,372	14 0	200	3,400	17 0
Hastings	7,865	114,792	14 6	7,849	109,886	14 0	11,613	171,749	14 8
Totals	11,979	172,974	14 1	11,226	157,916	14 0	16,380	248,949	15 2
Muskoka	146	2,482	17 0	110	1,716	15 6	114	1,940	17 0
Parry Sound	112	1,792	16 0	53	1,008	19 0	112	2,352	21 0
Nipissing	77	1,617	21 0	70	497	12 0	97	1,455	15 0
Algoma	264	3,564	13 5	76	1,140	15 0	87	1,392	16 0
Totals	599	11,455	19 0	309	4,361	14 0	410	7,139	17 1
The Province	130,923	1,786,637	13 6	91,144	1,360,524	14 9	99,172	1,581,106	15 9

AREA AND PRODUCE—PEAS.

TABLE XIII. Showing by County Municipalities and groups of Counties the area and produce of Peas in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95; also the yield per acre.

Counties.	1895.			1894.			Yearly average for the fourteen years 1882-95.		
	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.
Essex	3,570	81,396	22.8	2,862	52,947	18.5	3,391	64,136	18 9
Kent	2,731	51,616	18.9	2,836	48,779	17.2	8,100	152,466	18.8
Elgin	7,277	136,808	18.8	11,209	169,256	15.1	12,450	222,153	17.8
Norfolk	10,801	166,335	15.4	15,376	181,437	11.8	16,474	294,874	17.9
Haldimand	15,489	247,824	16.0	16,323	202,405	12.4	14,681	245,980	16 8
Welland	5,724	95,018	16.6	5,561	81,191	14 6	4,553	75,346	16.5
Totals	45,592	778,997	17.1	54,167	736,015	13.6	59,649	1,054,955	17.7
Lambton	9,340	177,460	19.0	7,069	122,294	17.3	9,071	165,895	18.3
Huron	42,311	994,309	23.5	44,415	879,417	19.8	36,282	810,610	22.3
Bruce	49,715	1,128,531	22.7	49,200	979,080	19.9	40,951	922,702	22 5
Totals	101,366	2,300,300	22.7	100,684	1,980,791	19.7	86,304	1,899,207	22.0
Grey	53,331	1,029,288	19.3	51,526	1,020,215	19.8	47,922	1,010,156	21.1
Simcoe	58,274	1,346,129	23.1	54,673	1,115,329	20.4	37,691	822,938	21.8
Totals	111,605	2,375,417	21.3	106,199	2,135,544	20.1	85,613	1,833,094	21.4
[illegible]ex	13,212	310,482	23.5	15,693	268,350	17.1	20,742	398,608	19.2
Oxford	14,356	325,881	22.7	15,316	271,093	17.7	16,346	334,594	20 5
Brant	12,530	187,950	15.0	14,297	187,291	13.1	10,489	193,368	18.4
[illegible]erth	27,286	750,365	27.5	27,626	524,894	19.0	24,723	551,366	22.3
Wellington	37,562	852,657	22.7	34,388	623,810	18.3	37,601	821,452	21.8
Waterloo	18,928	405,059	21.4	18,764	337,752	18.0	16,084	354,185	22.0
Dufferin	19,382	358,567	18.5	18,428	392,516	21.3	13,866	286,131	20 6
Totals	143,256	3,190,961	22.3	144,212	2,605,706	18.1	139,851	2,939,704	21.0
Lincoln	6,343	111,003	17.5	5,521	77,846	14.1	5,340	93,384	17.5
Wentworth	13,788	239,911	17.4	14,051	195,309	13.9	11,642	223,212	19.2
Halton	12,419	263,283	21.2	11,097	147,590	13.3	11,022	224,276	20 3
Peel	20,154	380,911	18.9	20,026	282,367	14.1	16,092	321,732	20.0
York	40,276	898,155	22 3	40,542	656,780	16.2	31,795	684,789	21.5
Ontario	32,665	538,973	16.5	35,377	562,494	15.9	28,935	579,184	20.2
Durham	36,143	614,431	17.0	34,285	593,131	17.3	25,540	493,101	19.3
Northumberland	37,155	505,308	13.6	34,660	629,834	18.2	23,769	416,874	17.5
Prince Edward	24,159	345,473	14.3	23,190	486,990	21.0	16,456	296,519	18.0
Totals	223,102	3,897,448	17.5	218,749	3,632,341	16.6	170,591	3,333,071	19.5
Lennox and Addington	11,030	181,995	16.5	9,881	169,953	17.2	9,469	170,169	18.0
Frontenac	11,199	176,944	15.8	8,260	153,636	18.6	10,616	188,699	17.8
Leeds	3,915	63,423	16.2	3,453	62,845	18.2	} 5,953	111,347	18.7
Grenville	1,525	27,298	17.9	1,517	28,065	18.5			
Dundas	1,275	29,070	22.8	883	16,689	18.9	1,492	31,738	21.3
Stormont	1,853	38,357	20.7	1,285	24,030	18.7	2,264	44,313	19.6
Glengarry	2,869	54,224	18.9	3,432	42,557	12.4	4,956	84,493	17.0
Prescott	2,415	49,266	20.4	2,959	31,957	10.8	6,946	112,939	16.3
Russell	1,684	35,701	21.2	1,784	28,009	15.7	3,225	59,986	18.6
Carleton	9,270	208,575	22 5	9,057	142,195	15.7	12,013	251,910	21.0
Renfrew	24,255	414,761	17.1	23,888	437,150	18.3	21,416	429,021	20.0
Lanark	12,316	221,688	18.0	10,238	204,760	20.0	11,541	237.707	20.6
Totals	83,606	1,501,302	18.0	76,637	1,341,846	17.5	89,891	1,722,322	19.2
Victoria	24,194	401,620	16.6	20,656	371,808	18.0	17,909	357,520	20.0
Peterborough	22,768	311,922	13.7	21,841	421,531	19.3	16,708	317,779	19.0
Haliburton	2,035	31,543	15.5	2,635	34,255	13 0	1,821	32,278	17.7
Hastings	25,457	404,766	15.9	21,713	410,376	18.9	19,851	357,162	18.0
Totals	74,454	1,149,851	15.4	66,845	1,237,970	18.5	56,289	1,064,739	18.9
Muskoka	3,616	73,043	20.2	3,445	66,144	19.2	3,168	64,251	20.3
Parry Sound	3,977	84,312	21.2	3,835	80,535	21.0	2,198	46,295	21.1
Nipissing	1,432	31,074	21.7	2,193	30,702	14.0	479	9,414	19.7
Algoma	7,957	185,398	23.3	8,041	175,294	21.8	5,115	128,727	25.2
Totals	16,982	373,827	22.0	17,514	352,675	20.1	10,960	248,690	22.7
The vince	799,963	15,568,103	19.5	785,007	14,022,888	17.9	699,148	14,095,782	20.2

AREA AND PRODUCE—CORN.

TABLE XIV. Showing by County Municipalities and groups of Counties the area, produce and yield per acre of Corn for husking and for silo and fodder in Ontario for the years 1894 and 1895, also the total acreage for 1894 and 1895, with the yearly average for the fourteen years 1882-95.

Counties.	For husking.			For silo and fodder.			Total area.		
	Acres.	Bushels.	Bush. per acre	Acres.	Tons.	Tons per acre.	1895. Acres.	1894. Acres.	1882-95. Acres.
Essex	52,166	4,955,770	95.0	1,452	6,171	4.25	53,618	50,413	35,548
Kent	39,561	3,639,612	92.0	1,946	14,031	7.21	41,507	40,136	29,192
Elgin	25,091	2,182,917	87.0	3,511	31,669	9.02	28,602	25,544	16,778
Norfolk	21,091	1,708,371	81.0	4,361	46,009	10.55	25,452	19,569	15,219
Haldimand	2,813	219,414	78.0	2,329	24,012	10.31	5,142	3,356	2,356
Welland	9,199	717,522	78.0	1,620	15,309	9.45	10,819	9,146	6,913
Totals	149,921	13,423,606	89.5	15,219	137,201	9.02	165,140	148,164	106,006
Lambton	20,313	1,746,918	86.0	3,494	38,015	10.88	23,807	20,784	10,669
Huron	2,863	186,095	65.0	5,958	81,744	13.72	8,821	5,207	2,987
Bruce	738	42,066	57.0	4,502	48,515	10 74	5,240	3,153	1,539
Totals	23,914	1,975,079	82.6	13,954	168,274	12.06	37,868	29,144	15,195
Grey	898	47,594	53.0	4,807	59,847	12.45	5,705	3,917	1,708
Simcoe	2,419	169,330	70.0	2,554	35,756	14.00	4 973	4,544	1,940
Totals	3,317	216,924	65.4	7,361	95,603	12.99	10,678	8,461	3,648
Middlesex	22,930	1,880,260	82.0	8,079	102,926	12.74	31,009	24,376	14,433
Oxford	12,416	856,704	69.0	7,977	87,588	10.98	20,393	15,380	10,700
Brant	6,197	446,184	72.0	3,038	31,383	10.33	9,235	6,638	5,379
Perth	1,054	71,672	68.0	6,092	70,850	11.63	7,146	4,014	2,097
Wellington	461	32,270	70.0	4,589	54,747	11.93	5,050	2,420	1,461
Waterloo	1,555	89,430	66.0	2,537	25,243	9 95	3,892	2,812	1,756
Dufferin	178	12,104	68.0	399	4,788	12.00	577	687	231
Totals	44,591	3,388,624	76.0	32,711	377,525	11.54	77,302	56,327	35,967
Lincoln	7,765	574,610	74.0	1,792	18,225	10.17	9,557	8,113	6,846
Wentworth	4,188	259,656	62.0	5,228	56,932	10.89	9,416	6,017	5,460
Halton	1,200	98,400	82.0	3,062	35,825	11.70	4,262	2,726	1,772
Peel	641	35,255	55.0	2,627	31,524	10.00	3,268	2,289	1,210
York	1,423	83,967	59 0	5,920	72,698	12.28	7,343	5,064	2,634
Ontario	2,935	228,930	78.0	3,731	45,444	12 18	6,666	5,900	3,442
Durham	2,872	198,168	69 0	2,669	35,071	13.14	5,541	4,289	2,616
Northumberland	5,276	327,112	62.0	5,015	53,510	10.67	10,291	8,434	5,563
Prince Edward	7,092	517,716	73.0	3,101	33,491	10.80	10,193	9,241	7,260
Totals	33,392	2,323,804	69.6	33,145	382,720	11.55	66,537	52,073	36,803
Lennox and Addington	4,456	329,744	74.0	3,122	37,464	12.00	7,578	5,735	3,293
Renfrew	2,864	194,752	68.0	3,567	40,735	11.42	6,431	5,351	2,863
Leeds	8,822	599,896	68 0	4,567	58,321	12.77	13,389	12,391	9,957
Grenville	4,588	461,368	101.0	3,773	42,909	13.11	7,841	7,047	
Dundas	3,891	342,408	88.0	4,082	62,761	15.13	7,973	6,122	3,068
Stormont	3,229	229,259	71.0	1,965	28,296	14.40	5,194	4,738	2,279
Glengarry	2,152	148,488	69 0	3,804	53,784	14.15	5,953	4,075	1,985
Prescott	2,712	249,504	92.0	1,560	22,152	14.20	4,272	4,905	2,138
Russell	1,124	62,944	56 0	1,118	14,735	13.18	2,242	1,664	972
Carleton	1,601	112,070	70.0	4,618	61,281	13.27	6,219	7,272	3,068
Renfrew	821	41,871	51.0	1,703	21,952	12.89	2,524	2,406	993
Lanark	1,721	132,517	77.0	3,542	53,555	15.12	5,263	4,693	2,361
Totals	37,961	2,904,821	76.5	36,918	496,945	13.46	74,879	66,509	32,967
Victoria	449	23,797	53.0	1,158	13,201	11.40	1,607	1,268	764
Peterborough	636	29,892	47.0	1,762	20,933	11.88	2,398	2,415	886
Haliburton	208	8,320	40.0	40	480	12.00	248	158	132
Hastings	8,069	500,278	62.0	7,316	80,183	10.96	15,385	13,453	8,349
Totals	9,362	562,287	60.1	10,276	114,797	11.17	19,638	17,294	10,131
Muskoka	224	13,888	62.0	104	624	6 00	328	305	251
Parry Sound	140	5,600	40.0	92	920	10.00	232	264	88
Nipissing	42	2,016	48 0	26	208	8 00	68	33	21
Algoma	65	3,250	50 0	93	837	9.00	158	148	90
Totals	471	24,754	52.6	315	2,589	8 22	786	737	450
The Province 1895	302,929	24,819,899	81.9	149,899	1,775,654	11 85	452,828	378,709	241,167
The Province 1894	267,348	16,275,352	60.9	111,361	1,049,765	9 43			

AREA AND PRODUCE—BUCKWHEAT.

TABLE XV. Showing by County Municipalities and groups of Counties the area and produce of Buckwheat in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95; also the yield per acre.

Counties.	1895.			1894.			Yearly average for the fourteen years 1882-95.		
	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre
Essex	796	16,716	21.0	1,284	18,233	14.2	979	19,727	20.2
Kent	1,034	20,783	20.1	2,049	35,038	17.1	1,152	22,237	19.3
Elgin	2,591	53,634	20.7	2,610	48,546	18.6	1,748	34,031	19.5
Norfolk	8,464	171,819	20.3	8,252	136,158	16.5	5,389	96,963	18 0
Haldimand	741	17,784	24.0	1,358	17,382	12.8	768	12,884	16 8
Welland	2,531	48,342	19.1	3,531	49,434	14.0	2,132	37,542	17.6
Totals	16,157	329,078	20.4	19,084	304,791	16.0	12,168	223,384	18.4
Lambton	845	16,647	19.7	772	13,664	17.7	661	11,785	17.8
Huron	383	7,131	20.2	374	6,545	17.5	371	7,022	18.9
Bruce	351	7,547	21.5	156	2,543	16.3	438	7,780	17.8
Totals	1,549	31,325	20.2	1,302	22,752	17.5	1,470	26,587	18.1
Grey	1,501	28,669	19.1	823	13,662	16.6	606	10,683	17.6
Simcoe	5,686	137,033	24.1	4,493	85,816	19.1	1,406	27,998	19.9
Totals	7,187	165,702	23.1	5,316	99,478	18.7	2,012	38,681	19.2
Middlesex	1,493	32,846	22.0	1,776	44,400	25.0	732	14,403	19.7
Oxford	1,331	27,818	20.9	884	14,851	16.8	734	12,945	17.6
Brant	1,723	24,639	14.3	947	16,099	17.0	748	12,906	17.3
Perth	190	3,800	20.0	164	3,690	22.5	131	2,708	20.6
Wellington	509	13,998	27.5	150	1,695	11.3	222	4,782	21.5
Waterloo	46	667	14.5	79	1,580	20.0	146	2,439	16.7
Dufferin	717	17,925	25.0	535	6,420	12.0	188	3,680	19.6
Totals	6,009	121,693	20.3	4,535	88,735	19.6	2,901	53,863	18.6
Lincoln	388	7,527	19.4	806	12,251	15.2	752	14,351	19.1
Wentworth	1,021	17,051	16.7	1,206	19,778	16.4	900	17,403	19.3
Halton	342	6,840	20.0	383	7,660	20.0	207	3,551	17.2
Peel	208	4,784	23.0	282	5,640	20.0	262	4,382	16 7
York	2,325	58,823	25.3	2,296	51,660	22.5	626	13,720	21.9
Ontario	6,764	156,248	23.1	8,048	143,254	17.8	2,282	47,464	20.8
Durham	9,896	215,733	21.8	13,323	246,476	18.5	4,562	92,993	20.4
Northumberland	20,899	363,643	17.4	21,813	410,084	18.8	10,211	200,135	19.6
Prince Edward	10,279	160,352	15.6	14,310	210,357	14.7	9,145	174,685	19.1
Totals	52,122	991,001	19.0	62,467	1,107,160	17.7	28,947	568,684	19.6
Lennox and Addington	5,145	112,161	21.8	5,917	88,755	15.0	4,069	84,699	20.8
Frontenac	1,648	32,136	19.5	2,210	40,885	18.5	1,932	40,953	21.2
Leeds	2,727	62,994	23.1	2,240	47,712	21.3	5,801	116,400	20.1
Grenville	5,085	110,853	21.8	3,328	58,240	17.5			
Dundas	1,824	41,952	23.0	1,918	36,634	19.1	1,706	41,223	24.2
Stormont	2,243	53,832	24.0	2,211	46,431	21.0	2,209	49,774	22.5
Glengarry	1,625	42,600	25.6	1,822	28,606	15.7	1,305	26,401	20.2
Prescott	1,749	39,178	22.4	1,884	33,912	18.0	1,648	31,567	19.2
Russell	1,391	36,027	25.9	1,562	31,240	20.0	1,028	23,122	22.5
Carleton	5,456	132,035	24.2	4,692	84,456	18.0	3,875	80,278	20.7
Renfrew	2,785	57,093	20.5	3,229	53,601	16.6	1,611	32,516	20.2
Lanark	3,893	98,882	25.4	3,845	63,443	16.5	5,265	106,172	20.2
Totals	35,571	819,743	23.0	34,858	613,915	17.6	30,449	633,105	20.8
Victoria	3,652	79,248	21.7	4,875	81,413	16.7	2,023	36,486	18.0
Peterborough	4,048	83,794	20.7	2,962	50,650	17.1	1,657	31,755	19.2
Haliburton	660	13,332	20.2	372	4,948	13.3	337	5,963	17.7
Hastings	7,349	134,957	18.5	8,741	146,849	16.8	5,319	106,752	20 1
Totals	15,709	311,331	19.8	16,950	283,860	16.7	9,336	180,956	19.4
Muskoka	278	5,894	21.2	181	3,077	17.0	339	7,760	22.9
Parry Sound	259	6,579	25.4	176	2,587	14.7	152	2,988	19.7
Nipissing	157	3,674	23.4	157	3,140	20.0	55	1,133	20.6
Algoma	264	5,729	21.7	242	4,840	20.0	154	3,342	21.7
Totals	958	21,876	22.8	756	13,644	18.0	700	15,223	21.7
The Province	135,262	2,791,749	20.6	145,268	2,534,335	17.4	87,983	1,740,483	19.8

AREA AND PRODUCE—BEANS.

TABLE XVI. Showing by County Municipalities and groups of Counties the area and produce of Beans in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95; also the yield per acre.

Counties.	1895.			1894.			Yearly average for the fourteen years 1882-95.		
	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre	Acres.	Bushels.	Bush per acre.
Essex	761	14,611	19.2	1,551	18,457	11.9	746	13,787	18 5
Kent	40,809	877,393	21.5	35,905	448,813	12.5	19,649	327,785	16.7
Elgin	7,338	150,429	20.5	4,924	85,185	17.3	2,163	40,521	18.7
Norfolk	849	15,791	18.6	489	6,846	14.0	638	9,110	14 3
Haldimand	291	3,929	13.5	188	3,234	17.2	221	3,417	15 5
Welland	1,501	24,616	16.4	1,157	16,661	14.4	908	12,294	13.6
Totals	51,549	1,086,769	21.1	44,214	579,196	13.1	24,325	406,914	16 7
Lambton	3,020	61,306	20.3	2,002	30,631	15.3	753	12,807	17.0
Huron	241	4,627	19.2	196	3,998	20.4	128	2,850	22.3
Bruce	256	4,736	18.5	87	1,592	18.3	119	2,078	17.5
Totals	3,517	70,669	20.1	2,285	36,221	15.9	1,000	17,735	17.7
Grey	548	10,631	19.4	504	7,560	15.0	202	3,500	17 3
Simcoe	888	18,914	21.3	434	6,640	15.3	208	3,829	18.4
Totals	1,436	29,545	20.6	938	14,200	15.1	410	7,329	17.9
Middlesex	3,439	75,314	21.9	1,107	19,594	17.7	662	12,072	18.2
Oxford	289	5,347	18.5	347	7,287	21.0	258	5,076	19.7
Brant	338	5,171	15.3	58	725	12.5	354	4,658	13.2
Perth	235	4,700	20.0	87	1,871	21.5	61	1,306	21.4
Wellington	32	720	22.5	55	963	17.5	41	684	16.7
Waterloo	95	2,375	25.0	29	392	13.5	41	702	17.1
Dufferin	63	1,260	20 0	34	680	20.0	28	536	19 1
Totals	4,491	94,887	21.1	1,717	31,512	18.4	1,445	25,034	17 3
Lincoln	320	5,088	15.9	120	2,040	17.0	179	3,092	17.3
Wentworth	127	2,540	20.0	21	336	16.0	140	2,544	18.2
Halton	116	2,320	20.0	54	810	15.0	42	730	17.4
Peel	45	1,125	25.0				46	974	21.2
York	655	10,939	16.7	394	8,865	22.5	197	4,114	20.9
Ontario	639	12,333	19 3	712	11,890	16.7	320	5,450	17.0
Durham	759	14,421	19.0	1,094	19,036	17.4	428	7,261	17.0
Northumberland	2,298	44,122	19.2	2,479	37,433	15.1	832	14,476	17.4
Prince Edward	914	10,602	11.6	772	13,896	18.0	472	8,461	17.9
Totals	5,873	103,490	17.6	5,646	94,306	16.7	2,656	47,102	17.7
Lennox and Addington	301	7,525	25.0	384	7,680	20.0	216	4,417	20.4
Frontenac	273	3,959	14.5	152	2,660	17.5	251	5,430	21.6
Leeds	271	4,255	15.7	262	4,375	16.7	396	7,441	18.8
Grenville	248	3,670	14.8	127	1,905	15.0			
Dundas	304	6,414	21.1	170	2,788	16.4	236	5,139	21.8
Stormont	191	4,011	21.0	122	2,013	16.5	164	3,833	23.4
Glengarry	277	5,125	18.5	205	2,460	12 0	194	3,520	18 1
Prescott	370	7,104	19.2	359	5,170	14.4	469	10,254	21.9
Russell	179	4,475	25.0	205	2,870	14.0	212	3,991	18.8
Carleton	719	16,106	22.4	373	7,311	19.6	467	9,693	20.8
Renfrew	620	10,044	16.2	468	8,060	17.2	507	10,134	20.0
Lanark	151	3,111	20.6	358	6,695	18.7	222	4,643	20.9
Totals	3,904	75,799	19.4	3,185	53,977	16.9	3,334	68,495	20.5
Victoria	558	7,700	13.8	311	3,577	11.5	153	2,427	15 9
Peterborough	282	2,961	10.5	235	3,525	15.0	152	2,258	14 9
Haliburton	63	863	13.7	49	515	10.5	32	540	16 9
Hastings	947	19,698	20.8	608	8,755	14.4	404	7,235	17 9
Totals	1,850	31,222	16.9	1,203	16,372	13.6	741	12,460	16 8
Muskoka	38	380	10.0	21	420	20.0	45	769	17.1
Parry Sound	39	468	12.0	33	660	20.0	22	381	17 3
Nipissing	10	150	15.0	13	260	20.0	11	208	18.9
Algoma	40	800	20 0	26	390	15.0	21	420	20 0
Totals	127	1,798	14.2	93	1,730	18 6	99	1,778	18.0
The Province	72,747	1,494,179	20.5	59,281	827,514	14.0	34,010	586,847	17.3

AREA AND PRODUCE—HAY AND CLOVER.

TABLE XVII. Showing by County Municipalities and groups of Counties the area and produce of Hay and Clover in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95; also the yield per acre.

Counties.	1895.			1894.			Yearly average for the fourteen years 1882-95.		
	Acres.	Tons.	Tons per acre.	Acres.	Tons.	Tons per acre.	Acres.	Tons.	Tons per acre.
Essex	41,518	44,424	1.07	41,129	68,274	1.66	38,009	58,949	1.55
Kent	50,707	48,172	.95	51,956	81,051	1.56	52,510	80,049	1.52
Elgin	49,815	29,889	.60	52,475	67,168	1.28	51,192	75,807	1.48
Norfolk	33,412	11,694	.35	38,584	51,703	1.34	40,632	54,816	1.35
Haldimand	53,356	24,010	.45	54,312	72,778	1.34	51,032	64,760	1.27
Welland	52,929	37,580	.71	53,161	83,463	1.57	48,089	65,885	1.37
Totals	281,737	195,769	.69	291,617	424,437	1.46	281,464	400,266	1.42
Lambton	64,472	43,196	.67	64,939	84,421	1.30	58,809	84,508	1.44
Huron	103,091	50,515	.49	114,478	144,242	1.26	101,668	141,468	1.39
Bruce	96,845	35,833	.37	100,586	121,709	1.21	90,792	113,119	1.25
Totals	264,408	129,544	.49	280,003	350,372	1.25	251,269	339,095	1.35
Grey	127,868	44,754	.35	130,218	151,053	1.16	121,576	151,244	1.24
Simcoe	88,026	73,062	.83	87,503	120,754	1.38	81,484	109,484	1.34
Totals	215,894	117,816	.55	217,721	271,807	1.25	203,060	260,728	1.28
Middlesex	90,222	64,058	.71	94,764	129,827	1.37	91,956	140,291	1.53
Oxford	60,500	43,560	.72	61,826	92,121	1.49	62,688	97,942	1.56
Brant	28,580	10,860	.38	30,306	42,428	1.40	31,470	46,538	1.48
Perth	77,406	45,670	.59	76,484	108,607	1.42	70,019	106,411	1.52
Wellington	94,194	55,574	.59	93,847	126,693	1.35	86,208	128,959	1.50
Waterloo	39,060	17,186	.44	41,902	63,691	1.52	42,247	63,976	1.51
Dufferin	36,556	19,740	.54	38,103	51,058	1.34	35,060	47,039	1.34
Totals	426,518	256,648	.60	437,232	614,425	1.41	419,648	631,156	1.50
Lincoln	41,397	25,666	.62	43,369	70,258	1.62	41,016	56,357	1 37
Wentworth	40,383	18,172	.45	43,769	65,216	1.49	44,945	65,664	1.46
Halton	31,881	16,259	.51	33,247	52,198	1.57	33,572	46,702	1.39
Peel	37,595	15,790	.42	39,260	59,283	1.51	38,741	55,948	1.44
York	80,813	58,185	.72	81,299	127,639	1.57	76,184	108,130	1.42
Ontario	61,205	48,964	.80	58,384	95,750	1.64	54,644	79,021	1.45
Durham	48,215	34,715	.72	44,662	63,420	1.42	44,141	61,220	1.39
Northumberland	58,368	39,107	.67	54,155	72,026	1.33	54,814	69,096	1 26
Prince Edward	32,914	11,849	.36	31,001	37,821	1.22	31,402	40,769	1.30
Totals	432,771	268,707	.62	429,146	643,611	1.50	419,459	582,907	1.39
Len'x & Addington	60,445	32,036	.53	62,318	73,535	1.18	53,308	65,969	1.24
Frontenac	67,247	49,090	.73	70,226	90,592	1.29	64,303	80,755	1.26
Leeds	68,354	41,696	.61	72,123	93,039	1.29	} 112,525	145,894	1.30
Grenville	41,770	32,163	.77	41,251	49,089	1.19			
Dundas	39,757	58,104	1.46	39,961	59,942	1.50	36,480	57,065	1.56
Stormont	38,828	50,865	1.31	35,672	48,157	1.35	33,754	50,751	1.50
Glengarry	46,118	65,488	1.42	47,406	80,590	1.70	38,787	59,996	1.55
Prescott	48,926	61,647	1.26	46,186	77,131	1.67	37,319	55,831	1.50
Russell	26,537	45,644	1.72	26,208	40,884	1.56	19,892	29,250	1.47
Carleton	77,314	115,971	1.50	75,386	125,895	1.67	63,187	90,347	1.43
Renfrew	75,852	91,781	1.21	79,291	112,593	1.42	65,710	75,894	1.15
Lanark	70,403	73,219	1.04	76,219	113,566	1.49	63,853	88,003	1.38
Totals	661,591	717,704	1.08	672,247	965,013	1.44	589,118	799,755	1.36
Victoria	48,910	38,639	.79	45,420	60,409	1.33	40,839	49,664	1 22
Peterborough	40,553	16,221	.40	42,254	50,705	1.20	39,607	44,535	1.12
Haliburton	12,400	7,812	.63	13,757	13,895	1.01	10,776	11,199	1.04
Hastings	79,954	47,173	.59	77,382	86,668	1.12	72,379	89,085	1.23
Totals	181,817	109,845	.60	178,813	211,677	1.18	163,601	194,483	1.19
Muskoka	24,177	17,649	.73	23,437	31,406	1.34	21,469	26,274	1.22
Parry Sound	20,782	12,054	.58	21,034	26,924	1.28	13,464	15,485	1.15
Nipissing	6,125	7,350	1.20	5,613	8,420	1.50	2,297	3,155	1.37
Algoma	21,854	16,828	.77	20,080	27,108	1.35	13,853	18,184	1.31
Totals	72,938	53,881	.74	70,164	93,858	1.34	51,083	63,098	1.24
The Province	2,537,674	1,849,914	.73	2,576,943	3,575,200	1.39	2,378,702	3,271,488	1 38

AREA AND PRODUCE—POTATOES.

TABLE XVIII. Showing by County Municipalities and groups of Counties the area and produce of Potatoes in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95; also the yield per acre.

Counties.	1895.			1894.			Yearly average for the fourteen years 1882-95.		
	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.
Essex	3,370	394,290	117.	3,481	193,892	56.	2,899	272,547	94.
Kent	3,746	546,916	146.	3,658	263,010	72.	3,308	386,866	117.
Elgin	3,984	585,648	147.	3,943	340,281	86.	2,921	300,328	103.
Norfolk	3,938	527,692	134.	3,485	279,497	80.	3,321	333,083	100.
Haldimand	1,434	174,948	122.	1,413	92,552	66.	1,408	142,825	101.
Welland	3,195	392,985	123.	3,122	246,326	79.	2,457	232,367	95.
Totals	19,667	2,622,479	133.	19,102	1,415,558	74.	16,314	1,668,016	102.
Lambton	3,800	592,800	156.	3,271	220,465	67.	3,071	302,270	98.
Huron	5,260	873,160	166.	5,059	577,738	114.	4,997	616,932	123.
Bruce	5,133	759,684	148.	4,163	406,309	98.	4,620	539,698	117.
Totals	14,193	2,225,644	157.	12,493	1,204,512	96.	12,688	1,458,900	115.
Grey	6,914	1,057,842	153.	6,410	646,128	101.	6,740	838,186	124.
Simcoe	9,738	1,908,648	196.	9,109	921,831	101.	7,343	955,407	130.
Totals	16,652	2,966,490	178.	15,519	1,567,959	101.	14,083	1,793,593	127.
Middlesex	7,621	1,333,675	175.	6,225	593,243	95.	5,625	621,158	110.
Oxford	3,603	565,671	157.	3,361	343,830	102.	3,233	363,986	113.
Brant	2,601	327,726	126.	2,352	228,850	97.	2,240	247,548	111.
Perth	4,331	818,559	189.	4,174	456,218	109.	3,757	447,053	119.
Wellington	7,824	1,384,848	177.	6,016	803,136	134.	5,940	765,608	129.
Waterloo	3,534	551,304	156.	3,159	293,788	93.	2,953	357,461	121.
Dufferin	5,447	849,732	156.	4,007	524,516	131.	3,399	473,539	139.
Totals	34,961	5,831,515	167.	29,294	3,243,581	111.	27,147	3,276,353	121.
Lincoln	2,715	339,375	125.	1,691	139,338	82.	1,898	187,868	99.
Wentworth	4,489	565,614	126.	4,021	357,869	89.	3,685	424,776	115.
Halton	1,911	286,650	150.	1,722	161,351	94.	1,608	179,930	112.
Peel	4,175	597,025	143.	4,296	396,232	92.	3,151	335,844	107.
York	9,929	1,737,575	175.	7,944	775,334	98.	7,624	851,636	112.
Ontario	6,587	1,165,899	177.	5,924	555,671	94.	4,536	574,627	127.
Durham	3,884	613,672	158.	3,580	380,196	106.	3,229	408,125	126.
Northumberland	5,378	747,542	139.	4,817	452,798	94.	4,443	496,536	112.
Prince Edward	2,353	280,007	119.	2,115	181,044	86.	2,325	215,867	93.
Totals	41,421	6,333,359	153.	36,110	3,398,833	94.	32,499	3,675,209	113.
Lennox and Addington	3,114	467,100	150.	3,382	372,020	110.	3,172	354,394	112.
Frontenac	3,963	531,042	134.	3,627	429,800	119.	3,922	407,473	104.
Leeds	3,815	637,105	167.	4,300	486,330	113.	7,254	863,371	119.
Grenville	3,717	743,400	200.	3,436	483,102	141.			
Dundas	2,442	446,886	183.	2,132	307,434	144.	2,349	319,814	136.
Stormont	1,884	293,904	156.	1,669	197,443	118.	1,983	223,964	113.
Glengarry	2,312	360,672	156.	2,090	210,045	101.	2,365	257,793	109.
Prescott	2,516	467,976	186.	2,625	230,213	88.	2,419	306,442	127
Russell	1,467	268,461	183.	1,294	156,056	121.	1,466	159,904	109.
Carleton	6,139	920,850	150.	6,042	760,688	126.	5,997	757,758	126.
Renfrew	4,434	647,364	146.	4,195	517 244	123.	3,919	564,121	144.
Lanark	3,290	631,680	192.	2,992	398,834	133.	3,501	486,415	139.
Totals	39,093	6,416,440	164.	37,784	4,549,209	120.	38,347	4,701,449	123.
Victoria	3,238	599,030	185.	3,153	310,255	98.	3,126	406,756	130.
Peterborough	3,693	601,959	163.	3,240	313,632	97.	2,838	344,858	122.
Haliburton	798	151,620	190.	654	57,944	88.	685	92,686	135.
Hastings	6,054	829,398	137.	5,589	558,900	100.	5,635	659,081	117.
Totals	13,783	2,182,007	158.	12,636	1,240,731	98.	12,283	1,503,381	122.
Muskoka	1,403	200,629	143.	1,208	131,189	109.	1,333	177,896	133.
Parry Sound	1,443	268,398	186.	1,317	176,873	134.	942	143,360	152.
Nipissing	715	129,415	181.	533	53,300	100.	232	34,991	151.
Algoma	1,316	214,508	163.	1,257	181,585	144.	896	149,843	167.
Totals	4,877	812,950	167.	4,315	542,747	126.	3,403	506,090	149.
The Province	184,647	29,390,884	159.	167,253	17,163,130	103.	156,764	18,582,991	119.

AREA AND PRODUCE—MANGEL-WURZELS.

TABLE XIX. Showing by County Municipalities and groups of Counties the area and produce of Mangel-Wurzels in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95; also the yield per acre.

Counties.	1895.			1894.			Yearly average for the fourteen years 1882-95.		
	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.
Essex	614	272,002	443	356	124,600	350	290	118,469	409
Kent	631	305,404	484	441	205,065	465	345	147,543	428
Elgin	837	405,108	484	532	279,300	525	365	162,087	444
Norfolk	423	217,422	514	260	98,540	379	243	100,530	414
Haldimand	260	80,600	310	145	36,830	254	178	57,917	325
Welland	147	61,446	418	87	22,707	261	138	57,285	415
Totals	2,912	1,341,982	461	1,821	767,042	421	1,559	643,831	413
Lambton	976	537,776	551	730	261,340	358	502	209,970	418
Huron	3,032	1,573,608	519	2,762	1,350,618	489	1,826	867,865	475
Bruce	846	351,090	415	628	274,436	437	492	210,098	427
Totals	4,854	2,462,474	507	4,120	1,886,394	458	2,820	1,287,933	457
Grey	635	241,300	380	408	135,864	333	410	172,594	421
Simcoe	669	324,465	485	783	345,303	441	616	258,404	419
Totals	1,304	565,765	434	1,191	481,167	404	1,026	430,998	420
Middlesex	2,707	1,426,589	527	1,756	698,888	398	1,545	683,869	443
Oxford	1,848	924,000	500	1,552	760,480	490	1,325	632,817	478
Brant	579	233,916	404	540	314,820	583	392	192,382	491
Perth	3,343	1,711,616	512	2,672	1,087,504	407	1,955	908,136	465
Wellington	1,863	849,528	456	1,594	672,668	422	1,135	510,983	450
Waterloo	622	240,714	387	512	223,744	437	512	223,559	437
Dufferin	178	92,738	521	162	60,102	371	130	55,508	427
Totals	11,140	5,479,101	492	8,788	3,818,206	434	6,994	3,207,254	459
Lincoln	280	121,240	433	251	88,603	353	245	97,854	399
Wentworth	760	394,440	519	669	289,008	432	487	236,241	485
Halton	837	348,192	416	593	235,421	397	482	219,193	455
Peel	800	373,600	467	700	248,500	355	504	204,584	406
York	2,312	984,912	426	1,795	755,695	421	1,778	798,594	449
Ontario	961	449,748	468	942	404,118	429	777	354,164	456
Durham	588	248,724	423	580	205,900	355	520	232,215	447
Northumberland	538	238,872	444	717	292,536	408	498	215,747	433
Prince Edward	313	125,200	400	288	109,440	380	160	49,063	307
Totals	7,389	3,284,928	445	6,535	2,629,221	402	5,451	2,407,655	442
Lennox and Addington	196	67,228	343	167	45,925	275	130	44,632	343
Frontenac	354	127,086	359	237	87,453	369	193	69,955	362
Leeds	395	169,455	429	509	163,898	322	292	117,122	401
Grenville	178	73,692	414	114	48,450	425			
Dundas	263	128,081	487	145	61,625	425	125	53,889	431
Stormont	201	77,988	388	178	55,180	310	58	21,067	363
Glengarry	261	135,198	518	158	56,564	358	94	36,724	391
Prescott	132	52,272	396	76	20,748	273	87	31,438	361
Russell	583	228,536	392	141	74,025	525	137	53,867	393
Carleton	926	353,732	382	728	262,808	361	596	221,481	372
Renfrew	257	108,197	421	148	74,000	500	130	49,212	379
Lanark	286	136,708	478	261	94,221	361	177	71,778	406
Totals	4,032	1,658,173	411	2,862	1,044,897	365	2,019	771,165	382
Victoria	1,284	586,788	457	1,279	501,368	392	705	329,669	468
Peterborough	517	210,419	407	422	150,232	356	341	130,147	382
Haliburton	35	11,235	321	19	4,750	250	10	3,397	340
Hastings	764	314,004	411	487	194,800	400	486	174,749	360
Totals	2,600	1,122,446	432	2,207	851,150	386	1,542	637,962	414
Muskoka	40	11,760	294	61	16,775	275	50	13,711	274
Parry Sound	23	6,900	300	35	14,875	425	14	4,620	330
Nipissing	19	6,973	367	2	800	400	2	888	444
Algoma	70	21,000	300	48	21,600	450	27	8,813	326
Totals	152	46,633	307	146	54,050	370	93	28,032	301
he Province	34,383	15,961,502	464	27,670	11,532,127	417	21,504	9,414,830	438

AREA AND PRODUCE—CARROTS.

TABLE XX. Showing by County Municipalities and groups of Counties the area and produce of Carrots in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95; also the yield per acre.

Counties.	1895.			1894.			Yearly average for the fourteen years 1882-95.		
	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.
Essex	232	83,520	360	70	16,030	229	99	27,125	274
Kent	246	96,924	394	271	85,094	314	168	52,201	311
Elgin	423	159,048	376	310	141,360	456	194	68,428	353
Norfolk	328	112,832	344	267	79,833	299	177	53,267	301
Haldimand	149	35,909	241	51	10,863	213	90	23,104	257
Welland	83	28,469	343	63	13,986	222	81	23,548	291
Totals	1,461	516,702	354	1,032	347,166	336	809	247,673	306
Lambton	392	170,520	435	290	107,590	371	233	73,692	316
Huron	409	150,103	367	461	167,343	363	473	181,074	383
Bruce	398	106,664	268	300	102,900	343	306	103,610	339
Totals	1,199	427,287	356	1,051	377,833	359	1,012	358,376	354
Grey	401	123,508	308	497	142,639	287	504	180,976	359
Simcoe	615	218,325	355	623	246,085	395	567	206,409	364
Totals	1,016	341,833	336	1,120	388,724	347	1,071	387,385	362
Middlesex	972	424,764	437	712	229,264	322	540	183,738	340
Oxford	372	136,152	366	374	143,990	385	334	133,220	399
Brant	231	82,929	359	99	46,530	470	190	77,966	410
Perth	329	114,163	347	311	82,415	265	374	141,365	378
Wellington	442	155,142	351	312	99,840	320	314	108,629	346
Waterloo	364	141,232	388	330	116,160	352	320	130,953	409
Dufferin	169	50,700	300	116	34,800	300	139	46,356	333
Totals	2,879	1,105,082	384	2,254	752,999	334	2,211	822,227	372
Lincoln	218	56,898	261	101	21,210	210	124	38,240	308
Wentworth	198	78,408	396	181	71,495	395	216	81,860	381
Halton	69	24,150	350	79	29,309	371	109	42,250	388
Peel	359	124,932	348	366	107,604	294	294	100,133	341
York	480	167,520	349	422	165,002	391	613	245,795	401
Ontario	140	51,240	366	270	99,900	370	417	161,076	386
Durham	230	86,710	377	230	82,800	360	423	161,005	381
Northumberland	388	118,728	306	278	85,902	309	283	95,878	339
Prince Edward	115	40,250	350	87	20,532	236	67	15,714	235
Totals	2,197	748,836	341	2,014	683,754	340	2,545	941,951	370
Lennox and Addington	111	28,860	260	111	27,750	250	64	18,419	288
Frontenac	169	43,771	259	146	48,618	333	168	45,446	271
Leeds	199	70,844	356	207	51,336	248	227	73,081	322
Grenville	205	70,110	342	189	69,552	368			
Dundas	283	112,301	397	202	68,882	341	117	45,536	389
Stormont	199	63,083	317	158	41,870	265	77	22,909	298
Glengarry	265	108,120	408	223	65,339	293	90	27,149	302
Prescott	127	46,101	363	88	19,272	219	65	19,089	294
Russell	253	109,043	431	160	67,200	420	164	55,309	340
Carleton	375	123,000	328	401	107,869	269	519	167,259	322
Renfrew	184	60,720	330	170	63,410	373	135	41,877	310
Lanark	211	79,336	376	236	75,670	322	168	57,329	341
Totals	2,581	915,339	355	2,290	706,768	309	1,794	573,891	320
Victoria	227	72,867	321	458	168,544	368	285	104,827	368
Peterborough	344	131,762	383	346	108,298	313	373	127,976	343
Haliburton	90	22,500	250	23	5,520	240	26	7,401	285
Hastings	645	193,500	300	294	89,964	306	217	63,589	293
Totals	1,306	420,619	322	1,121	372,326	332	901	303,793	337
Muskoka	119	33,677	283	111	29,970	270	96	27,437	286
Parry Sound	108	30,564	283	101	35,350	350	54	15,458	286
Nipissing	18	4,500	250	22	5,500	250	6	1,412	235
Algoma	118	36,934	313	70	15,750	225	47	12,525	266
Totals	363	105,675	291	304	86,570	285	203	56,832	280
The Province	13,002	4,581,373	352	11,186	3,716,140	332	10,546	3,692,128	350

AREA AND PRODUCE—TURNIPS.

TABLE XXI. Showing by County Municipalities and groups of Counties the area and produce of Turnips in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95; also the yield per acre.

Counties.	1895.			1894.			Yearly average for the fourteen years 1882-95.		
	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.	Acres.	Bushels.	Bush. per acre.
Essex	198	78,606	397	256	52,224	204	239	67,651	283
Kent	308	111,496	362	649	211,574	326	370	127,679	345
Elgin	610	256,810	421	746	308,844	414	417	156,156	374
Norfolk	2,203	870,185	395	1,941	789,987	407	1,242	481,635	388
Haldimand	224	65,632	293	102	22,134	217	128	37,605	294
Welland	272	90,032	331	224	62,944	281	195	65,612	336
Totals	3,815	1,472,761	386	3,918	1,447,707	369	2,591	936,338	361
Lambton	514	244,150	475	574	211,232	368	399	136,977	343
Huron	9,138	3,682,614	403	8,383	3,336,434	398	7,232	2,954,292	409
Bruce	8,776	3,361,208	383	8,243	3,519,761	427	6,437	2,683,326	417
Totals	18,428	7,287,972	395	17,200	7,067,427	411	14,068	5,774,595	410
Grey	11,808	4,581,504	388	12,823	5,449,775	425	9,871	4,074,137	413
Simcoe	7,214	3,607,000	500	6,408	3,242,448	506	4,337	1,909,473	440
Totals	19,022	8,188,504	430	19,231	8,692,223	452	14,208	5,983,610	421
Middlesex	2,599	1,099,377	423	2,507	952,660	380	1,923	737,014	383
Oxford	8,363	3,905,521	467	7,898	3,451,426	437	6,025	2,707,295	449
Brant	4,546	1,822,946	401	4,163	2,044,033	491	3,140	1,438,272	458
Perth	5,423	2,429,504	448	6,591	2,306,850	350	5,024	2,043,198	407
Wellington	14,975	6,094,825	407	15,868	6,918,448	436	13,469	5,911,815	439
Waterloo	5,708	1,923,596	337	5,884	2,194,732	373	5,291	2,169,195	410
Dufferin	4,135	1,988,935	481	3,802	1,767,930	465	2,792	1,186,008	425
Totals	45,749	19,264,704	421	46,713	19,636,079	420	37,664	16,192,797	430
Lincoln	482	153,758	319	344	108,016	314	268	94,268	352
Wentworth	4,036	1,642,652	407	4,039	1,643,873	407	2,776	1,285,422	463
Halton	2,625	989,625	377	2,361	989,259	419	1,889	832,168	441
Peel	2,347	880,125	375	2,219	918,666	414	1,572	630,454	401
York	7,049	2,875,992	408	6,355	2,993,205	471	4,161	1,739,189	418
Ontario	13,636	5,918,024	434	14,094	6,116,796	434	12,598	5,475,553	435
Durham	7,690	3,745,030	487	6,508	2,759,392	424	5,655	2,563,541	453
Northumberland	5,822	2,398,664	412	4,778	1,949,424	408	3,738	1,539,182	412
Prince Edward	317	134,725	425	143	47,476	332	128	36,439	285
Totals	44,004	18,738,595	426	40,841	17,526,107	429	32,785	14,196,216	433
Lennox and Addington	202	48,884	242	274	34,250	125	164	40,757	249
Frontenac	399	139,650	350	624	224,640	360	411	126,630	308
Leeds	635	262,890	414	447	136,782	306	377	139,916	371
Grenville	250	106,250	425	159	66,621	419			
Dundas	132	65,340	495	278	113,702	409	87	31,544	363
Stormont	161	51,520	320	152	47,880	315	93	26,462	285
Glengarry	181	92,310	510	283	118,577	419	93	39,173	421
Prescott	265	147,870	558	369	105,165	285	163	62,210	382
Russell	381	162,687	427	738	341,694	463	409	176,584	432
Carleton	1,916	749,156	391	2,254	852,012	378	1,671	620,846	372
Renfrew	985	475,755	483	521	163,594	314	657	232,080	353
Lanark	992	477,152	481	861	327,180	380	588	227,909	388
Totals	6,499	2,779,464	428	6,960	2,532,097	364	4,713	1,724,111	366
Victoria	5,543	2,161,770	390	5,434	2,140,996	394	3,840	1,517,956	395
Peterborough	3,031	1,354,857	447	2,392	940,056	393	1,689	672,927	398
Haliburton	425	108,375	255	343	78,547	229	316	89,370	283
Hastings	2,410	1,115,830	463	1,911	728,091	381	1,145	393,318	344
Totals	11,409	4,740,832	416	10,080	3,887,690	386	6,990	2,673,571	382
Muskoka	785	239,425	305	841	280,053	333	930	298,028	320
Parry Sound	1,110	411,810	371	941	284,182	302	768	242,329	316
Nipissing	140	49,000	350	173	69,200	400	74	25,163	340
Algoma	845	323,635	383	759	271,722	358	575	204,741	356
Totals	2,880	1,023,870	356	2,714	905,157	334	2,347	770,261	328
The Province	151,806	63,496,702	418	147,657	61,694,487	418	115,366	48,251,499	418

RATIOS OF AVERAGE PRODUCTION.

TABLE XXII. Showing by County Municipalities and groups of Counties the per cent. ratios of total yields in 1895 to average of total yields for the fourteen years 1882-95.

Counties.	Fall Wheat.	Spring Wheat.	Barley.	Oats.	Rye.	Peas.	Buckwheat.	Beans.	Potatoes.	Mangel-wurzels.	Carrots.	Turnips.	Hay and Clover.
Essex	89	26	122	174	267	127	85	106	145	230	308	116	75
Kent	86	26	150	140	234	34	93	268	141	207	186	87	60
Elgin	74	7	152	127	246	62	158	371	195	250	232	164	39
Norfolk	54	3	48	111	153	56	177	173	158	216	212	181	21
Haldimand	88	13	41	133	110	101	138	115	122	139	155	175	37
Welland	69	8	18	140	219	126	129	200	169	107	121	137	57
Group	78	17	91	140	187	74	147	267	157	208	209	157	49
Lambton	109	20	103	186	405	107	141	479	196	256	231	178	51
Huron	78	22	92	159	198	123	102	162	142	181	83	125	36
Bruce	62	40	69	148	156	122	97	228	141	167	103	125	32
Group	81	29	88	162	240	121	118	398	153	191	119	126	38
Grey	76	38	76	136	77	102	268	304	126	140	68	112	30
Simcoe	110	44	144	172	125	164	489	494	200	126	106	189	67
Group	100	41	118	152	116	130	428	403	165	131	88	137	45
Middlesex	91	8	158	144	466	78	228	624	215	209	231	149	46
Oxford	71	13	83	137	246	97	215	105	155	146	102	144	44
Brant	47	7	47	110	342	97	191	111	132	122	106	127	23
Perth	87	32	117	163	454	136	140	360	183	188	81	119	43
Wellington	50	79	78	146	242	104	293	105	181	166	143	103	43
Waterloo	64	13	74	125	312	114	27	338	154	108	108	89	27
Dufferin	61	73	103	160	442	125	487	235	179	167	109	168	42
Group	74	51	91	145	337	109	226	379	178	171	134	119	41
Lincoln	73	29	21	120	288	119	52	165	181	124	149	163	46
Wentworth	77	12	40	124	242	107	98	100	133	167	96	128	28
Halton	92	16	53	126	203	117	193	318	159	159	57	119	35
Peel	73	35	68	127	104	118	109	116	178	183	125	140	28
York	74	49	55	127	116	131	429	266	204	123	68	165	54
Ontario	92	41	62	134	209	93	329	226	203	127	32	108	62
Durham	133	32	52	130	171	125	232	199	150	107	54	146	57
Northumberland	86	41	28	136	97	121	182	305	151	111	124	156	57
Prince Edward	108	28	49	119	86	117	92	125	130	255	256	370	29
Group	81	38	52	128	129	117	174	220	172	136	79	132	46
Lennox and Addington	104	65	43	121	72	107	132	170	132	151	157	120	49
Frontenac	54	61	27	125	49	94	78	73	130	182	96	110	61
Leeds and Grenville	60	48	69	99	76	81	149	107	160	208	193	264	51
Dundas	41	56	40	101	89	92	102	125	140	238	247	207	102
Stormont	60	43	97	99	57	87	108	105	131	370	275	195	100
Glengarry	23	57	120	107	40	64	161	146	140	368	398	236	109
Prescott	74	56	80	131	....	44	124	69	153	166	242	238	110
Russell	26	24	118	143	46	60	156	112	168	424	195	92	156
Carleton	22	47	93	127	41	83	164	166	122	160	74	121	128
Renfrew	45	84	69	117	61	97	176	99	115	220	145	205	121
Lanark	87	70	99	122	56	93	93	67	130	190	138	209	83
Group	67	60	59	117	60	87	129	111	136	215	159	161	90
Victoria	68	39	69	161	93	112	217	317	147	178	70	142	78
Peterborough	66	38	43	120	96	98	264	131	175	162	103	201	36
Haliburton	107	60	73	104	121	98	224	160	164	331	304	121	70
Hastings	78	46	41	114	66	113	126	272	126	180	304	284	53
Group	71	40	53	133	75	108	172	254	145	176	138	177	56
Muskoka	30	38	126	122	49	114	76	49	113	86	123	80	67
Parry Sound	79	23	94	167	28	182	220	123	187	149	198	170	78
Nipissing	376	298	190	382	176	340	324	72	370	785	319	196	233
Algoma	119	44	110	161	148	144	171	190	143	288	295	158	93
Group	112	45	112	155	70	150	144	101	161	166	186	133	85
The Province	79	45	71	138	120	110	160	255	158	170	124	132	57

RATIOS OF AVEREAGE YIELDS PER ACRE.

TABLE XXIII. Showing by County Municipalities and groups of Counties the per cent. ratios of average yields per acre in 1895 to average yields per acre for fourteen years 1882-95.

Counties.	Fall Wheat.	Spring Wheat.	Barley.	Oats.	Rye.	Peas.	Buckwheat.	Beans.	Potatoes.	Mangel-wurzels.	Carrots.	Turnips.	Hay and Clover.
Essex	116	118	114	123	103	121	104	104	124	108	131	140	69
Kent	98	109	120	109	98	101	104	129	125	113	127	105	63
Elgin	88	93	109	102	106	106	106	110	143	109	106	113	41
Norfolk	56	87	89	100	91	86	113	130	134	124	114	102	26
Haldimand	88	91	100	112	90	95	143	87	121	95	94	100	35
Welland	86	59	94	121	96	101	109	121	129	101	118	99	52
Group	89	103	116	112	99	97	111	126	130	112	116	107	49
Lambton	105	95	124	123	120	104	111	119	159	132	138	138	47
Huron	110	113	102	106	99	105	107	86	135	109	96	99	35
Bruce	95	115	97	104	91	101	121	106	126	97	79	92	30
Group	104	112	106	110	106	103	112	114	137	111	101	96	36
Grey	97	109	96	98	86	91	109	112	123	90	86	94	28
Simcoe	133	115	119	118	100	106	121	116	151	116	98	114	62
Group	123	112	113	107	98	100	120	115	140	103	93	102	43
Middlesex	106	115	116	116	106	122	112	120	159	119	129	110	46
Oxford	76	92	101	108	101	111	119	94	139	105	92	104	46
Brant	59	81	71	92	101	82	83	116	114	82	88	88	26
Perth	104	133	111	110	128	123	97	93	159	110	92	110	39
Wellington	86	108	89	97	91	104	128	135	137	101	101	93	39
Waterloo	71	116	83	92	94	97	87	146	129	89	95	82	29
Dufferin	104	122	98	97	111	90	128	105	112	122	90	113	40
Group	88	114	96	103	104	106	109	122	138	107	103	98	40
Lincoln	93	124	98	102	111	100	102	92	126	109	85	91	45
Wentworth	80	75	91	105	107	91	87	110	110	107	104	88	31
Halton	89	83	89	100	105	104	116	115	134	91	90	85	37
Peel	83	98	80	91	77	95	138	118	134	115	102	94	29
York	97	93	84	94	108	104	116	80	156	95	87	98	51
Ontario	99	85	89	98	96	82	111	114	139	103	95	100	55
Durham	100	92	85	101	94	88	107	112	125	95	99	108	52
Northumberland	105	99	89	100	100	78	89	110	124	103	90	100	53
Prince Edward	114	99	98	102	106	79	82	65	128	130	149	149	28
Group	91	92	88	98	102	90	97	99	135	101	92	98	45
Lennox and Addington	104	97	102	94	98	92	105	123	134	100	90	97	43
Frontenac	122	105	98	100	105	89	92	67	129	99	96	114	58
Leeds and Grenville	119	101	94	86	91	89	111	81	154	106	108	112	52
Dundas	146	111	98	99	102	107	95	97	135	113	102	136	94
Stormont	109	116	98	99	61	106	107	90	138	107	106	112	87
Glengarry	154	107	117	110	162	111	127	102	143	132	135	121	92
Prescott	189	116	108	114	.....	125	117	88	146	110	123	146	84
Russell	157	111	130	125	112	114	155	133	168	100	127	99	117
Carleton	148	101	99	105	96	107	117	108	119	103	102	105	105
Renfrew	113	99	92	98	94	86	101	81	101	111	106	137	105
Lanark	130	104	107	112	97	87	126	99	138	118	110	124	75
Group	120	103	104	102	95	94	111	95	133	108	111	117	79
Victoria	112	100	100	109	75	83	121	87	142	98	87	99	65
Peterborough	95	80	82	84	94	72	108	70	134	107	112	112	36
Haliburton	118	93	92	102	88	88	114	81	141	94	88	90	61
Hastings	96	93	90	92	94	88	92	116	117	114	102	135	48
Group	99	91	95	98	92	81	102	101	130	104	96	109	50
Muskoka	88	92	103	108	99	100	93	58	108	107	99	95	60
Parry Sound	121	91	103	98	81	100	129	69	122	91	99	117	50
Nipissing	119	126	109	109	85	110	114	79	120	83	106	103	88
Algoma	100	88	98	96	120	92	100	100	98	92	118	108	59
Group	103	93	102	102	101	97	105	79	112	102	104	109	60
The Province	95	102	99	104	99	97	104	118	134	106	101	100	53

ACREAGE UNDER CROP: ALSO PASTURE AND ORCHARD.

TABLE XXIV. Showing by County Municipalities and groups of Counties in Ontario, the total area under crop enumerated in tables VIII-XXI for the years 1894 and 1895, with the yearly average for the fourteen years 1882-95; also the area in Pasture and in Orchard and Garden for the same period.

Counties.	Acres under crop.			Pasture.		*Orchard and Garden.		
	1895.	1894.	1882-95.	1895.	1894.	1895.	1894.	1882-95.
	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.
Essex	184,135	177,807	154,597	36,368	32,780	7,512	7,045	6,358
Kent	252,127	249,463	221,630	53,950	50,931	8,581	8,928	8,008
Elgin	190,988	188,355	173,390	68,924	67,021	7,614	7,689	7,168
Norfolk	163,991	162,569	157,625	40,506	37,012	6,983	6,592	7,487
Haldimand	146,224	150,198	144,225	34,952	31,045	4,735	4,785	4,578
Welland	120,265	118,905	112,226	26,481	28,741	6,776	6,688	6,790
Totals	1,057,730	1,047,297	963,693	261,181	247,530	42,201	41,727	40,369
Lambton	228,887	209,931	186,411	86,137	90,879	7,956	7,596	6,710
Huron	370,921	353,888	342,188	154,769	148,995	10,029	9,892	8,819
Bruce	309,454	309,605	285,199	132,155	129,304	6,099	5,913	5,830
Totals	909,262	873,424	813,798	373,061	369,178	24,084	23,401	21,359
Grey	393,626	389,465	365,974	156,008	152,182	7,894	7,313	7,263
Simcoe	379,790	368,719	326,178	79,594	81,753	5,561	5,688	4,957
Totals	773,416	758,184	692,152	235,602	233,935	13,455	13,001	12,220
Middlesex	335,288	323,190	310,253	167,710	172,495	10,301	9,769	10,342
Oxford	236,231	234,104	221,248	86,040	85,782	8,171	8,365	8,293
Brant	121,405	122,577	121,084	27,328	25,413	3,847	3,751	4,233
Perth	276,401	259,884	240,845	84,715	88,194	4,787	5,082	4,882
Wellington	343,315	325,559	302,423	84,649	82,114	4,976	5,329	4,895
Waterloo	178,766	179,405	169,282	31,398	27,719	4,925	4,957	5,124
Dufferin	160,441	149,637	132,720	36,554	38,085	1,437	1,478	1,488
Totals	1,651,847	1,594,356	1,497,855	518,394	519,802	38,444	38,731	39,257
Lincoln	102,422	102,032	102,036	25,192	22,269	10,685	10,050	8,522
Wentworth	145,388	145,578	144,138	35,063	36,297	10,112	9,861	9,255
Halton	111,392	108,807	108,356	33,921	32,650	5,212	5,111	4,924
Peel	170,486	169,742	166,066	39,389	40,576	4,575	4,586	4,307
York	319,431	322,091	305,871	53,231	55,424	6,682	6,419	7,272
Ontario	262,459	261,824	250,975	57,777	56,137	5,596	5,429	5,325
Durham	211,441	216,355	205,657	46,112	44,246	3,852	3,792	3,721
Northumberland	228,183	229,865	220,949	62,625	64,747	7,172	7,233	6,635
Prince Edward	125,560	131,424	130,859	38,566	35,879	5,838	5,642	5,981
Totals	1,676,762	1,687,718	1,634,907	391,876	388,225	59,724	58,123	55,942
Lennox & Addington	140,862	144,532	139,901	51,897	57,478	3,080	2,442	2,766
Frontenac	139,966	140,554	140,832	69,314	66,594	2,063	1,997	2,127
Leeds	151,244	152,852	241,982	89,317	93,588	2,010	2,191	2,970
Grenville	101,364	94,908		50,505	54,227	589	609	
Dundas	90,925	92,299	87,649	38,324	38,983	1,546	1,152	1,222
Stormont	79,868	75,975	74,774	38,072	41,317	988	871	999
Glengarry	99,448	104,108	91,092	47,760	45,895	652	606	597
Prescott	99,312	100,352	90,409	39,056	40,648	304	269	283
Russell	59,035	59,779	52,212	19,600	21,824	190	177	152
Carleton	203,883	207,222	188,995	79,520	74,936	748	828	599
Renfrew	189,465	193,551	171,181	70,820	69,068	503	530	485
Lanark	156,121	163,123	150,480	110,990	106,484	946	809	1,025
Totals	1,511,493	1,529,255	1,429,507	705,175	711,042	13,619	12,481	13,135
Victoria	191,644	200,788	179,152	47,279	45,102	1,811	2,138	1,804
Peterborough	151,872	148,858	144,517	53,843	50,655	2,040	2,161	1,957
Haliburton	23,592	24,506	21,306	7,884	7,018	131	163	112
Hastings	229,919	222,102	222,854	100,853	98,204	5,895	5,978	5,450
Totals	597,027	596,254	567,828	209,859	200,979	9,877	10,440	9,323
Muskoka	42,953	41,929	39,386	10,946	10,600	133	385	382
Parry Sound	40,707	39,896	26,756	10,196	10,037	222	283	73
Nipissing	12,475	12,634	4,500	2,520	1,848	18	10	4
Algoma	47,501	46,206	33,847	9,845	10,005	837	386	232
Totals	143,636	140,665	104,489	33,507	32,490	1,210	1,064	691
The Province	8,321,173	8,227,153	7,704,229	2,728,655	2,703,241	202,614	198,968	192,296

*Statistics of orchard are taken from the municipal assessors' returns.

RATIOS OF AREAS UNDER CROP.

TABLE XXV. Showing by County Municipalities and groups of Counties the number of acres under the various crops in Ontario in 1895, per 1,000 acres of cleared land.

Counties.	Fall wheat.	Spring wheat.	Barley	Oats.	Rye.	Peas.	Corn.	Buckwheat.	Beans.	Potatoes.	Mangel-wurzels.	Carrots.	Turnips.	Hay and clover.	Totals.
Essex	99.8	1.2	15.6	196.6	10.2	14.5	218.2	3.2	3.1	13.7	2.5	.9	.8	169.0	749.3
Kent	151.4	2.0	25.5	131.7	6.3	7.8	119.1	3.0	117.1	10.8	1.8	.7	.9	145.5	723.6
Elgin	118.0	.3	23.1	136.2	12.3	23.6	92.7	8.4	23.8	12.9	2.7	1.4	2.0	161.3	618.7
Norfolk	135.3	.1	11.5	125.3	50.3	44.6	105.1	34.9	3.5	16.3	1.7	1.4	9.1	137.9	677.0
Haldimand	158.7	1.9	22.3	135.3	4.5	72.3	24.0	3.5	1.3	6.7	1.3	.7	1.0	249.0	682.5
Welland	99.9	.8	3.5	134.0	9.2	32.9	62.2	14.5	8.6	18.4	.8	.5	1.6	304.1	691.0
Group	129.0	1.1	18.3	142.8	15.2	29.7	107.7	10.5	33.6	12.8	1.9	1.0	2.5	183.7	689.8
Lambton	108.3	3.0	32.0	199.1	3.0	26.5	67.6	2.4	8.6	10.8	2.8	1.1	1.5	183.0	649.7
Huron	72.0	4.5	37.7	219.6	1.2	71.5	14.9	.6	.4	8.9	5.1	.7	15.4	174.1	626.6
Bruce	55.3	8.4	23.8	197.3	1.6	100.3	10.6	.7	.5	10.4	1.7	.8	17.7	195.5	624.6
Group	75.1	5.5	31.5	206.9	1.8	70.4	26.3	1.1	2.4	9.9	3.4	.8	12.8	183.7	631.6
Grey	30.2	18.2	25.2	226.2	.9	86.7	9.3	2.4	.9	11.2	1.0	.6	19.2	207.8	639.8
Simcoe	81.8	22.1	70.2	201.7	5.4	109.1	9.3	10.6	1.7	18.2	1.3	1.1	13.5	164.7	710.7
Group	54.2	20.0	46.1	214.8	3.0	97.1	9.3	6.3	1.2	14.5	1.1	.9	16.5	187.8	672.8
Middlesex	110.4	1.0	36.5	174.3	5.7	23.8	55.9	2.7	6.2	13.7	4.9	1.7	4.7	162.5	604.0
Oxford	101.6	2.6	34.7	197.2	9.0	39.6	56.2	3.7	.8	9.9	5.1	1.0	23.1	166.8	651.3
Brant	126.2	.5	61.1	127.3	24.2	69.6	51.3	9.6	1.9	14.5	3.2	1.3	25.3	158.8	674.8
Perth	85.7	6.2	42.6	237.7	2.3	67.9	17.8	.5	.6	10.8	8.3	.8	13.5	192.3	687.0
Wellington	25.9	32.7	62.4	267.5	6.0	81.9	11.0	1.2	.1	17.1	4.0	1.0	32.7	205.5	749.0
Waterloo	141.2	1.8	60.2	225.3	9.4	77.9	16.0	.2	.4	14.5	2.5	1.5	23.4	160.6	734.9
Dufferin	22.6	54.6	56.9	286.7	15.4	90.7	2.7	3.3	.3	25.5	.8	.8	19.3	171.0	750.6
Group	85.4	12.9	48.2	217.6	8.3	59.3	32.0	2.5	1.9	14.5	4.6	1.2	18.9	176.6	683.9
Lincoln	102.3	2.6	4.9	137.4	8.0	39.7	59.9	2.4	2.0	17.0	1.7	1.4	3.0	259.4	641.7
Wentworth	136.1	1.9	24.1	166.1	11.4	65.8	44.9	4.9	.6	21.4	3.6	.9	19.2	192.7	693.6
Halton	132.3	4.2	39.3	155.5	6.7	73.7	25.3	2.0	7	11.4	5.0	.4	15.6	189.3	661.4
Peel	88.2	18.7	109.3	189.7	6.3	81.8	13.3	.8	.2	17.0	3.3	1.5	9.5	152.6	692.2
York	62.5	29.4	76.9	226.4	3.7	95.5	17.4	5.5	1.6	23.5	5.5	1.1	16.7	191.5	757.2
Ontario	22.1	59.5	67.9	214.7	16.3	93.3	19.0	19.3	1.8	18.8	2.8	.4	39.0	174.8	749.7
Durham	19.6	37.4	86.6	168.3	29.3	125.2	19.2	34.3	2.6	13.5	2.0	.8	26.7	167.0	732.5
Northumberland	30.7	30.0	35.0	135.5	32.1	112.4	31.1	53.2	7.0	16.3	1.6	1.2	17.6	176.6	690.3
Prince Edward	17.5	8.2	87.0	88.3	33.9	129.0	54.4	54.9	4.9	12.6	1.7	.6	1.7	175.8	670.5
Group	60.1	26.1	62.9	173.7	16.5	94.4	28.2	22.1	2.5	17.5	3.1	.9	18.6	183.2	709.8
Lennox & Add	12.3	16.1	59.4	141.7	13.7	50 9	35.0	23.7	1.4	14.4	.9	.5	.9	278.7	649.6
Frontenac	2.6	20.5	16.5	167.4	6.7	49 6	28.5	7.3	1.2	17.5	1.6	.7	1.8	297.6	619.5
Leeds	7.6	14.5	16.7	173.9	4.3	14.8	50.5	10.3	1.0	14.4	1.5	.7	2.4	257.8	570.4
Grenville	.2	10.2	17.0	200 6	17.4	9.2	47.5	30.8	1.5	22.5	1.1	1.2	1.5	252.8	613 5
Dundas	1.6	14.9	15.7	222.3	6.9	9.1	56.9	13.0	2.2	17.4	1.9	2.0	1.0	284.0	648.9
Stormont	1.9	11.7	19 0	191.4	2 7	14.4	40.5	17.5	1.5	14.7	1.6	1.6	1.2	302.4	622.1
Glengarry	.4	24.0	14.4	208.9	.1	17 9	37.3	10.2	1.7	14.5	1.6	1.7	1.1	288.7	622.5
Prescott	.1	24.4	15.7	215.1	.0	16.0	28.3	11.6	2.4	16.7	.9	.8	1.8	324.1	657.9
Russell	.3	8 9	18.4	262.9	1.3	20.2	26.9	16.7	2.1	17.6	7.0	3.0	4.6	318.5	708.4
Carleton	.5	31.6	25 1	250.3	6.7	30.5	20.5	17.9	2.4	20.2	3.0	1.2	6.3	254.3	670.5
Renfrew	1.0	71 3	3.7	177.1	14.5	83.6	8.7	9.6	2.1	15.3	.9	.6	3.4	261.6	653.4
Lanark	5.7	30.8	9.0	144 8	6.8	40 9	17.5	12.9	.5	10.9	1.0	.7	3.3	233.9	518.7
Group	3.3	26.8	18 9	190 2	7.5	34.4	30.8	14.6	1.6	16.1	1.6	1.1	2.7	272.2	621.8
Victoria	14.6	44.4	72.8	257.1	5.7	93.2	6.2	14.0	2 1	12.5	4.9	.9	21.3	188.4	738.1
Peterborough	26.3	47.5	23 8	205.3	15.1	97.5	10.3	17.3	1.2	15.8	2.2	1.5	13.0	173.7	650.5
Haliburton	3.3	25.0	5.6	154 2	9.4	58.7	7.2	19.1	1.8	23.0	1.0	2.6	12.3	358.0	681.2
Hastings	20.8	16.9	37.0	149.4	21.6	68.8	41 6	19.9	2.6	16 4	2.1	1.7	6.5	216.0	621.3
Group	19.8	33.1	42.7	195.3	14.8	82.9	21.9	17.5	2.1	15 3	2.9	1.5	12.7	202.5	665.0
Muskoka	.3	8.5	13.7	192.3	2.8	64.7	5.9	5.0	.7	25.1	.7	2.1	14.0	432 3	768.1
Parry Sound	.7	5 4	11 8	209.0	1.8	71.4	4 2	4 7	.7	25.9	.4	1.9	19.9	373.2	731.0
Nipissing	1.0	18.6	7.0	166.6	4.0	74.5	3.5	8.2	.5	37.2	1.0	.9	7.3	318 5	648.8
Algoma	8.6	40.7	12.4	155.8	4 0	118.4	2 3	3 9	.6	19 6	1.0	1 8	12.6	325.3	707.0
Group	3.4	19.5	12.1	182.1	3 0	85.8	4.0	4.8	.6	24.6	.8	1.8	14.6	368.3	725.4
The Province	59.8	18.0	38.5	191.0	9 7	64.4	36.4	10.9	5.8	14.9	2.8	1.0	12.2	204.2	669.6

ONTARIO vs. AMERICAN STATES.

TABLE XXVI. A comparison of the average yield per acre of cereals in Ontario and the principal grain-growing states of the American Union and of Manitoba is presented in the following table for the ten years 1886-95, together with the annual average for the fourteen years 1882-95:

—	1895.	1894.	1893.	1892.	1891.	1890.	1889.	1888.	1887.	1886.	Average 1882-95
Fall wheat.	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.
Ontario	**19.0**	**21.2**	**19.2**	**21.2**	**25.7**	**19.8**	**15 8**	**16.7**	**16.1**	**20.4**	**20.1**
New York	18 1	14.8	14.5	16.2	16.6	14.5	13 8	14.1	15.2	16 3	15.1
Pennsylvania	16.6	15.0	14.0	14.6	15.6	12.0	12 3	13 5	9.7	12.7	13.3
Ohio	13.3	19.0	14.5	13.6	17.1	12 5	14.6	10.8	13.1	15.0	13.9
Michigan	13.2	15.8	13.2	14.7	18.8	13 5	14.7	14 6	13.3	16.0	15.2
Indiana	9.2	18.4	14.1	14.7	18.1	11.2	14.7	10.4	13.5	14.8	13.5
Illinois	11.0	18.2	11.5	16.2	18.0	9.8	16 0	13.7	15.2	13.7	13 7
Missouri	12.0	15.3	9.5	12.5	13.6	11.0	13.0	12.0	16.2	13.2	12.1
Kansas	7.7	10.4	8.4	17.4	15.5	13.7	18.4	15.2	9.6	11.4	13.7
California	13.0	11.3	13.3	13.0	13.0	12.0	13.3	12.1	11.0	11.6	12.3
Spring wheat.											
Ontario	**15.5**	**14.6**	**11.7**	**12.7**	**21.0**	**12.8**	**14.3**	**17.5**	**11.6**	**16.5**	**15.2**
Manitoba	27.8	17.0	15.6	16.5	25.3	21.1	12.4	...	27.7	15.0	20 2
Wisconsin	15 5	16.5	13.3	11.5	13.5	12.2	14 2	11 5	10.3	11.5	13.0
Minnesota	23 0	13.5	9 6	11.6	17.6	12.2	14.6	9.0	11 6	14.0	13.6
Iowa	19 5	14.8	11 5	11.5	15 3	11.3	13.1	9 8	10.0	12.2	12.4
Nebraska	12 0	7.0	8.7	12.5	15.0	10.8	12.0	9.3	10.1	11.0	11.4
Dakotas	16 7	9.4	9 1	12.3	16.8	9.6	9.4	9.7	14.3	11.5	12.7
Barley.											
Ontario	**25.3**	**22.6**	**21.0**	**24.6**	**29.2**	**22.2**	**26.7**	**26.1**	**22.3**	**26.5**	**25.5**
Manitoba	36.7	24.9	22.1	29.0	35.6	32.1	13.6	...	36.3	15.7	27.8
New York	23.9	17.5	20.3	22.2	23.3	16.7	21.1	21.8	20.3	22 0	21.7
Wisconsin	29.3	28.6	24 0	25.5	26.5	22.7	24.5	22.5	18.5	22.0	24.2
Minnesota	36.0	23.5	22.1	24.9	27 3	22.5	25.6	18.5	19.0	22.0	23 9
Iowa	28.0	15.5	22.6	21.1	27.3	22.6	22.4	21 0	19 0	22.5	22.2
Nebraska	28.4	5.7	12.0	22 2	27.2	17.3	22.7	22.5	21.0	22.0	20 8
California	20.3	15.2	22.5	24.0	23.7	22.3	20.3	20.0	20 5	22.2	20.4
Oats.											
Ontario	**35.7**	**30.0**	**30.3**	**34.8**	**40.8**	**28.0**	**33.5**	**35.4**	**29.6**	**36.2**	**34 3**
Manitoba	46.7	28.8	25.3	35.0	48.3	41.3	16.8	...	46 2	20.9	35.5
New York	31 7	22.1	24.0	28.0	31.5	17.8	21 5	28.1	23.5	28 7	27.1
Pennsylvania	31.7	22.3	26.8	25.2	27.2	17.2	26 2	26.5	25 5	28.7	26.3
Ohio	31.7	30.3	28.6	26.3	31.3	18.0	32.3	31 8	30 0	32.4	29.9
Michigan	28 9	26.1	26.0	28.7	32.5	20 6	33.7	33.2	29.6	29.5	30.3
Indiana	22.9	32.3	27.5	26.5	23.5	17 5	27.7	26.5	27.C	30.7	26.8
Illinois	24.4	36.1	27.2	26.3	36.2	21 0	37 5	35.8	29.5	31.8	31.7
Wisconsin	33.8	32.3	27.6	30.2	33.3	26 0	35 5	29 4	24 2	28.4	30 6
Minnesota	39 9	28.1	24.8	27.3	36.5	25.6	28.0	28.7	30.0	34.4	31.5
Iowa	46.2	25.6	24.8	25.4	36 7	25.8	34 5	26 2	30.5	34.1	31.8
Missouri	27 7	23.3	23.4	20.0	23.8	17.4	25.5	25 2	29 3	23.4	24.8
Kansas	17 9	17.9	18.4	28 5	20 0	24.0	31.5	25.8	26.6	26.4	27.1
Nebraska	23.8	12.6	15.0	26.7	35.5	21.3	31.6	25.8	27.5	29.5	27.2

WHEAT CROPS OF THE UNITED STATES, 1880-1895.

Years.	Total production.	Total area of crop.	Total value of crop.	Average value per bushel.	Average yield per acre.	Average value per acre.
	Bushels.	Acres.	$	Cents.	Bushels.	$ c.
1880	498,549,868	37,986,717	474,201,850	95.1	13.1	12 48
1881	383,280,090	37,709,000	456,880,427	119.2	10.2	12 12
1882	504,185,470	37,067,194	444,602,125	88.2	13.6	11 99
1883	421,086,160	36,455,593	383,649,272	91.1	11.6	10 52
1884	512,765,000	39,475,885	330,862,260	64.5	13.0	8 38
1885	357,112,000	34,189,246	275,320,390	77.1	10.4	8 05
1886	457,218,000	36,806,184	314,226,020	68.7	12.4	8 54
1887	456,329,000	37,641,783	310,612,960	68.1	12.1	8 25
1888	415,868,000	37,336,138	385,248,030	92.6	11.1	10 32
1889	490,560,000	38,123,859	342,491,707	69.8	12.9	8 98
1890	399,262,000	36,087,154	334,773,678	83.8	11.1	9 28
1891	611,780,000	39,916,897	513,472,711	83.9	15.3	12 86
1892	515,949,000	38,554,430	322,111,881	62.4	13.4	8 35
1893	396,131,725	34,629,418	213,171,381	53.8	11 4	6 16
1894	460,267,416	34,882,436	225,902,025	49.1	13.2	6 48
1895	467,102,947	34,047,332	237,938,998	50.9	13.7	6 99
Average for 10 years, 1870-79	312,152,728	25,187,414	327,407,258	104.9	12.4	13 00
Average for 10 years, 1880-89	449,695,359	37,279,162	371,809,504	82.7	12.1	9 97
Average for 6 years, 1890-95	475,082,181	36,352,945	307,895,112	64.8	13.1	8 47

THE WHEAT CROP OF THE WORLD.

The following is an estimate of the world's wheat crop, by countries, for the year 1895, as compared with the preceding four years, exclusive of countries for which neither official returns nor commercial estimates are to be had, such as China, Morocco, Ceylon, etc. Wherever available, official figures, either preliminary or final, have been used. It is unfortunate that in some important wheat-growing countries official returns of wheat production are not made. In such cases commercial estimates have been used.

In the counties of the Southern Hemisphere the wheat harvest takes place from November to February, and the estimates given for these countries are for the twelve months ending October 31st of the years indicated at the head of each column. The unit of measure used is the Winchester bushel, which has a capacity of 2,150.42 cubic inches. Where the original quantities are stated by weight they have been reduced to bushels on the somewhat arbitrary standard of 60 pounds of wheat to the bushel.

Five countries—Montenegro, Central Siberia and Central Asia, Western Siberia, Transcaucasia and Finland—have not heretofore appeared in similar tabulated statements.

Country.	1891.	1892.	1893.	1894.	1895.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
United States	611,780,000	515,949,000	396,132,000	460,267,000	467,103,000
Ontario	33,611,000	29,690,000	22,416,000	20,507,000	18,183,000
Manitoba	23,923,000	14,909,000	16,108,000	17,714,000	32,777,000
Rest of Canada	5,101,000	5,102,000	4,126,000	6,362,000	6,500,000
Total Canada	62,635,000	49,701,000	42,650,000	44,583,000	57,460,000
Mexico	15,000,000	14,000,000	15,000,000	18,000,000	14,000,000
Total North America	689,415,000	579,650,000	453,782,000	522,850,000	538,563,000
Argentina	32,000,000	36,000,000	57,000,000	80,000,000	60,000,000
Uruguay	2,805,000	3,292,000	5,703,000	8,915,000	10,000,000
Chile	18,000,000	16,500,000	19,000,000	16,000,000	15,000,000
Total South America	52,805,000	55,792,000	81,703,000	104,915,000	85,000,000

THE WHEAT CROP OF THE WORLD.—*Continued.*

County.	1891.	1892.	1893.	1894.	1895.
	Bushels.	Bushels.	Bushels	Bushels.	Bushels
Austria	41,074,000	50,174,000	43,660,000	48,190 000	41,200,000
Hungary	139,294,000	142,558,000	158,425,000	141,858,000	146,000,000
Croatia-Slavonia	6,597,000	7,071,000	8,223,000	8,786,000	6,200,000
Bosnia-Herzegovina	1,800,000	2,000,000	2,000,000	2,000,000	2,000 000
Total Austria-Hungary	188,765,000	201,803,000	212,308,000	200,834,000	195,400,000
Montenegro	220,000	250,000	250,000	250,000	220,000
Servia	8,000,000	10,000,000	8,651,000	7,500,000	9,400,000
Roumania	48,491,000	63,942,000	60,115,000	43,587,000	68,503,000
Turkey in Europe	22,500,000	26,000,000	20,000,000	20,000,000	21,500,000
Bulgaria	40,902,000	40,441,000	35,987,000	30,600,000	37,000,000
Greece	5,675,000	4,500,000	6,500,000	5,500,000	4,000,000
Italy	141,466,000	115,685,000	135,227,000	121,595,000	106,181,000
Spain	71,349,000	82,288,000	93,484,000	105,600,000	92,000,000
Portugal	7,000,000	6,000,000	5,500,000	9,000,000	7,000,000
France	219,261,000	310,836,000	277,509,000	347,537,000	339,129,000
Switzerland	2,500,000	4,000,000	3,300,000	4,500,000	5,000,000
Germany	85,750,000	116,215,000	110,040,000	110,681,000	110,000,000
Belgium	16,500,000	19,500,000	17,300,000	19,800,000	18,000,000
Netherlands	3,504,000	5,380,000	4,971,000	4,346,000	5,000,000
Great Britain	74,401,000	60,407,000	50,800,000	61,038,000	38,348,000
Ireland	2,615,000	2,214,000	1,666,000	1,532,000	1,109,000
Total United Kingdom	77,016,000	62,621,000	52,466,000	62,570,000	39,457,000
Denmark	4,666,000	4,964,000	4,661,000	4,162,000	4,500,000
Sweden	4,341,000	4,343,000	3,893,000	4,467,000	3,798,000
Norway	250,000	250,000	275,000	275,000	260,000
Russia (50 governments)	168,767,000	241,611,000	371,851,000	339,667,000	292,271,000
Poland (10 governments)	12,683,000	24,444,000	21,603,000	16,749,000	17,387,000
North Caucasus (3 governments)	72,000,000	71,402,000	68,307,000	61,679,000	67,127,000
Finland	126,000	113,000	100,000	130,000	100,000
Total Russia in Europe	253,576,000	337,570,000	461,861,000	418,225,000	376,885,000
Total Europe	1,201,732,000	1,410,588,000	1,514,298,000	1,521,029,000	1,443,233,000
Transcaucasia (7 governments)	46,747,000	47,000,000	47,000,000	47,000,000	47,000,000
Western Siberia (2 governments)	10,000,000	15,000,000	19,997,000	30,608,000	26,020,000
Central Siberia and Central Asia	8,000,000	10,000,000	10,000,000	10,000,000	10,479,000
Total Russia in Asia	64,747,000	72,000,000	76,997,000	87,608,000	83,499,000
British India	256,704,000	206,640,000	268,539,000	252,784,000	234,379,000
Asiatic Turkey	45,000,000	44,000,000	48,000,000	45,000,000	46,000,000
Persia	20,630,000	18,567,000	20,000,000	22,000,000	22,000,000
Japan	18,277,000	15,741,000	16,848,000	16,000,000	16,500,000
Cyprus	2,000,000	2,000,000	2,000,000	2,000,000	2,200,000
Total Asia	407,358,000	358,948,000	432,384,000	425,392,000	404,578,000
Egypt	11,140,000	8,252,000	10,000,000	12,000,000	14,000,000
Tunis	7,000,000	8,000,000	4,000,000	10,700,000	7,500,000
Algeria	26,184,000	19,979,000	20,274,000	28,900,000	24,800,000
Cape Colony	2,813,000	3,500,000	4,014,000	3,195,000	2,542,000
Total Africa	47,137,000	39,731,000	38,288,000	54,795,000	48,842,000
New South Wales	3,764,000	4,089,000	7,032,000	6,708,000	7,263,000
Victoria	13,153,000	14,110,000	15,282,000	15,736,000	11,807,000
South Australia	9,696,000	6,639,000	9,581,000	14,047,000	8,027,000
Western Australia	480,000	395,000	443,000	537,000	176,000
Tasmania	664,000	767,000	1,061,000	869,000	829,000
New Zealand	5,901,000	10,581,000	8,642,000	5,046,000	3,727,000
Queensland	215,000	405,000	477,000	426,000	562,000
Total Australasia	33,875,000	37,096,000	42,458,000	43,369,000	32,461,000
Grand total	2,432,322,000	2,481,805,000	2,562,913,000	2,672,341,000	2,552,677,000

[The above statement is taken from the Report of the Statistician of the Department of Agriculture, Washington, U. S. A.]

5 B.I. (1-3)

PRINCIPAL CROPS OF THE UNITED STATES IN 1895.

States and Territories.	Wheat.	Corn.	Oats.	Barley.	Potatoes.	Hay.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Tons.
Maine	83,808	596,904	5,551,484	408,467	10,139,089	1,127,031
New Hampshire	48,134	1,079,531	1,094,122	136,576	3,134,930	590,527
Vermont	185,078	2,153,460	5,100,598	619,778	5,134,052	893,959
Massachusetts		1,847,224	549,864	41,378	4,303,082	649,838
Rhode Island		284,805	121,986	8,954	1,010,712	74,817
Connecticut		1,768,338	742,217		3,462,656	400,440
New York	7,301,069	18,014,170	45,666,354	5,473,215	51,749,350	3,557,524
New Jersey	1,340,924	9,233,004	3,818,416		4,600,548	599,486
Pennsylvania	20,456,429	43,512,681	36,536,313	258,843	23,193,228	2,872,047
Delaware	1,069,300	4,281,291	468,790		327,758	68,108
Maryland	7,800,756	16,531,205	2,320,010		2,366,400	436,298
Virginia	6,605,583	32,607,158	8,125,061		3,031,325	774,601
North Carolina	4,748,752	36,378,412	7,652,333		1,461,026	273,540
South Carolina	858,624	19,860,908	4,390,322		401,400	144,986
Georgia	1,330,706	42,172,481	6,679,048		364,066	236,541
Florida		6,186,645	409,327		89,925	10,280
Alabama	373,283	44,376,487	5,210,172		480,130	116,980
Mississippi	37,184	35,977,169	2,076,812		363,196	148,432
Louisiana		22,574,284	575,745		827,789	74,532
Texas	2,081,640	107,905,565	14,569,178	53,654	1,276,082	676,677
Arkansas	1,452,300	50,359,558	8,306,486		1,476,300	214,396
Tennessee	5,766,728	83,133,025	10,234,958	57,542	2,443,328	550,876
West Virginia	4,303,780	16,662,789	3,539,320		2,297,631	337,425
Kentucky	9,501,225	93,939,331	13,252,458	88,978	3,908,184	693,718
Ohio	32,215,579	92,783,786	31,404,493	824,681	13,107,024	1,046,064
Michigan	15,237,803	33,600,242	23,265,192	1,255,344	23,916,497	720,968
Indiana	20,294,492	121,435,768	25,895,595	102,165	6,945,576	955,725
Illinois	19,060,712	255,136,554	73,707,130	352,900	13,749,197	1,319,133
Wisconsin	8,616,218	33,093,497	63,020,269	10,868,483	19,230,040	1,370,126
Minnesota	65,584,155	35,956,690	77,995,084	17,437,284	23,991,036	2,041,768
Iowa	13,654,778	298,502,650	182,967,338	12,684,868	21,340,980	4,612,583
Missouri	18,499,968	238,072,248	30,547,699	14,382	10,765,276	2,725,785
Kansas	22,919,566	204,759,746	30,075,992	258,365	7,869,240	4,181,289
Nebraska	14,787,024	125,685,069	39,911,696	1,393,048	7,994,373	1,811,454
South Dakota	29,261,088	12,423,442	18,154,774	2,543,678	4,037,154	1,547,768
North Dakota	61,057,710	658,979	19,067,914	8,839,286	5,192,448	585,377
Montana	1,065,223	33,275	2,446,071	142,525	288,426	292,657
Wyoming	198,198	68,283	581,175		275,800	254,883
Colorado	2,808,250	3,690,976	3,389,252	447,277	3,491,820	1,961,187
New Mexico	809,248	733,203	393,773	51,856	59,360	120,637
Arizona	250,654	132,730		261,241	29,118	63,655
Utah	2,443,526	181,035	926,357	190,980	1,064,852	459,712
Nevada	122,627			262,578	213,000	466,965
Idaho	1,221,899	50,839	1,102,358	259,847	408,240	459,598
Washington	7,195,952	93,263	3,671,975	1,942,211	2,412,757	600,273
Oregon	11,862,720	353,628	7,240,982	768,682	1,124,544	1,166,165
California	40,097,798	2,256,852	1,690,046	19,023,678	1,888,425	2,791,710
Oklahoma	2,592,656					
Total 1895	467,102,947	2,151,138,580	824,443,537	87,072,744	297,237,370	47,078,541
" 1894	460,267,416	1,212,770,052	662,036,928	61,400,465	170,787,338	54,874,408
" 1893	396,131,725	1,619,496,131	638,854,850	69,869,495	183,034,203	65,766,158

PART II.

LIVE STOCK, THE DAIRY AND THE APIARY.

LIVE STOCK.

Reports concerning the condition of live stock in the spring were far from being unanimous. In many counties, both east and west, horses were affected with distemper, which, though usually of a mild type of influenza, carried off some valuable animals. The bulk of correspondents, however, reported horses as being in good trim at the time of writing. Horned cattle, although rather thin where poorly managed, came through the winter in a most encouraging condition. In a few townships in the counties of Cornwall and Prescott cattle suffered from scouring, and there was a tendency to abort among some of the dairy cattle in Oxford, while elsewhere odd cases of "black foot" were hinted at; but, taken all together, cattle were in first-class condition. Sheep called forth a variety of reports. Some correspondents, more especially in the Lake Erie counties, spoke of ewes as being very prolific this spring, and describe the lambs as being quite vigorous and promising, while several others send accounts of heavy losses in early lambs. One correspondent mentioned that sheep in his section were suffering from disease of the liver, but the general verdict was that this class of live stock had entered the spring with excellent prospects. Swine did not do nearly so well as usual. Large numbers of pigs, littered in the fall, began to exhibit symptoms of paralysis towards the close of the winter. They manifested weakness in the hind quarters, and soon became unable to stand, and most of them had to be killed to end their misery. A few correspondents reported "black teeth," and here and there mention is made of losses in early litters. Otherwise swine may be regarded as having been in fair condition, but rather scarcer than usual, owing to the buyers snatching up hogs at so lively a rate in the fall. Except in a few cases there was an abundance of fodder throughout the Province, although the shortness of straw was a matter that called forth comment from many.

According to the August returns, the season had been a most trying one to pastures. The prolonged drouth rendered the fields bare and brown. In some places in the west live stock, it is said, had bitten the grass to the roots; a few farmers cut down small trees and fed the leaves to the cattle, and others fed growing oats and peas to the animals. These, however, were exceptional cases. There was a marked decrease in the milk flow, in some instances amounting to fifty per cent. of the June record. In the county of Grey a cheese factory and a creamery were forced to close for want of milk, and in other instances some factories withdrew milk waggons from certain routes. Sheep looked well, but horses and horned cattle were thin, though generally in good health. The horn fly was exceedingly troublesome to dairy stock and other animals. August rains were reviving pastures and also the hopes of our correspondents. Corn and pea straw were counted on to assist largely in winter feeding.

The November bulletin contained the following: "Live stock had rather scant pasture during the latter half of the season. In many sections the grass had to be supplemented with corn and other feed. The consequence is that cattle are generally thin, and owing to shortage of fodder, a number of dry cows have been disposed of at very low prices. In Middlesex and a few other localities some young cattle have been bought for fattening by a few farmers who make a specialty of the business. Feeding of cattle began earlier than usual this fall. Sheep receive favorable mention from most of those who refer to them. Special notice is made of the fact that a large number of lambs are being fed on rape for the Buffalo market. Swine have been thriving, and many have been sold on foot, although complaints come in of poor prices for these as well as for other live stock. Most of the hogs are sold at weights ranging from 150 to 250 lbs. A fair supply of pork is still in the hands of farmers. Fodder is scarce, and some farmers will find it hard to carry their stock through the winter. No mention has been made of disease among live stock. Corn has played an important part in the economy

of the farm this season. It has supplemented pasture, and has been cut and stored to be fed dry during the winter. The silo does not appear to have made any special advance in popularity during the year."

HORSES: In the table following, the number of horses is given by classes in 1894 and 1895 by county groups and for the Province; also the number of horses in each district and in the Province in each of the five years 1891-95:

Horses.		Lake Erie.	Lake Huron.	Georgian Bay.	West Midland.	Lake Ontario.	St. Lawrence and Ottawa	East Midland.	Northern Districts.	The Province.
Working horses.	1895	58,097	43,973	27,483	84,009	87,335	77,908	28,725	6,143	423,673
	1894	54,655	41,218	34,972	77,637	82,585	72,251	26,948	5,420	395,686
Breeding mares.	1895	8,787	8,810	6,699	15,243	14,357	11,795	4,738	1,727	72,156
	1894	11,357	10,113	8,246	18,384	18,336	14,705	6,093	1,728	88,962
Unbroken horses	1895	21,827	17,221	12,706	32,341	32,058	23,774	9,755	2,185	151,867
	1894	27,404	21,607	16,242	39,218	39,041	31,507	12,719	2,391	190,129
Totals	1895	88,711	70,004	56,888	131,593	133,750	113,477	43,218	10,055	647,696
	1894	93,416	72,938	59,460	135,239	139,962	118,463	45,760	9,539	674,777
	1893	96,091	73,856	60,065	135,597	142,043	120,351	47,844	9,340	685,187
	1892	96,995	74,437	59,582	135,355	142,423	122,411	48,565	9,046	688,814
	1891	96,722	75,357	56,161	132,879	143,716	120,760	44,756	8,108	678,459

An increase of 27,987 in the number of working horses has been more than offset by a decrease of 16,806 in the number of breeding mares, and a decline of 38,262 in the number of unbroken horses, there now being a total of 647,696 horses in the Province, or 27,081 less than in the previous year, and less than in any of the years comprising the table. Every district shared in the increase in the number of working horses, and in the decrease in the other two classes. The Lake Ontario group has the largest total number of horses, although not having as many breeding mares or unbroken horses as the West Midland district.

HOGS. The following table presents the total number of swine by county groups and for the Province for each of the five years 1891-95, and for 1894 and 1895 by classes of over and under one year:

Hogs.		Lake Erie.	Lake Huron.	Georgian Bay.	West Midland.	Lake Ontario.	St. Lawrence and Ottawa.	East Midland.	Northern Districts.	The Province.
Over 1 year	1895	44,930	20,501	22,039	42,142	38,817	50,570	20,218	4,968	244,185
	1894	41,232	19,622	20,303	37,404	35,856	48,583	20,082	4,796	227,878
Under 1 year.	1895	200,179	100,476	94,672	233,933	203,608	142,935	63,993	15,091	1,054,887
	1894	171,304	79,821	86,345	194,130	175,925	134,015	59,286	13,429	914,255
Totals	1895	245,109	120,977	116,711	276,075	242,425	193,505	84,211	20,059	1,299,072
	1894	212,536	99,443	106,648	231,534	211,781	182,598	79,368	18,225	1,142,133
	1893	183,004	87,737	94,857	203,816	185,726	168,885	71,859	16,138	1,012,022
	1892	182,353	87,878	96,312	200,400	183,399	159,715	70,737	16,180	996,974
	1891	223,384	102,295	104,600	243,343	219,485	162,088	82,864	18,257	1,156,316

There has been a substantial increase in the number of hogs of both classes in every district, which brings the total number up to 1,299,072, or 156,939 more than in the year preceding, and more also than any other year of the table. The West Midland district continues to lead in the total number of swine, although there are still more old pigs to be found in the St. Lawrence and Ottawa district than in any other group.

Horned Cattle. The table following gives by classes the number of cattle in 1894 and 1895 by county groups and by the Province, together with the total number in each of the five years 1891-95 :

Cattle.		Lake Erie.	Lake Huron.	Georgian Bay.	West Midland.	Lake Ontario.	St. Lawrence and Ottawa.	East Midland.	Northern Districts.	The Province.
Working oxen.	1895	386	449	626	262	267	655	643	982	4,270
	1894	518	358	658	255	406	664	838	1,215	4,912
Milch cows ..	1895	88,101	79,811	65,025	170,996	139,596	255,779	74,656	14,264	888,228
	1894	84,120	75,122	62,726	159,541	130,584	237,244	71,792	13,108	834,237
Store cattle over 2 years.	1895	36,806	66,964	42,687	85,276	49,849	54,367	22,855	6,840	365,644
	1894	38,450	70,870	42,513	90,942	47,139	56,619	23,468	6,808	376,809
Young and other cattle.	1895	89,502	123,959	94,587	188,746	136,950	171,880	64,501	21,836	891,961
	1894	92,523	122,303	95,432	187,675	132,638	167,355	64,916	20,441	883,343
Totals	1895	214,795	271,183	202,925	445,280	326,662	482,681	162,655	43,922	2,150,103
	1894	215,611	268,713	201,329	438,413	310,767	461,882	161,014	41,572	2,099,301
	1893	218,329	265,366	194,065	433,118	300,067	446,433	160,165	40,348	2,057,882
	1892	221,512	263,057	191,654	424,747	296,462	437,172	155,096	39,440	2,029,140
	1891	219,609	258,341	181,514	428,780	291,471	422,091	138,842	38,167	1,978,815

The number of oxen in the Province is now reduced to 4,270, and 23 per cent. of these are to be found in the comparatively newly settled northen districts. There is also a decrease in the number of store cattle in the Province. Milch cows and young cattle, however, have increased in number, the net result being an increase of 50,802 in the total number of cattle compared with the figures of the preceding year. While the West Midland group is credited with the greatest number of store cattle, and also of young cattle, the St. Lawrence and Ottawa counties have the most milch cows, and the greatest total number of cattle.

Sheep. The number of sheep is given in the following table by classes in 1894 and 1895, by county groups and for the Province, together with the total number in each of the five years 1891-95 :

Sheep.		Lake Erie.	Lake Huron.	Georgian Bay.	West Midland.	Lake Ontario.	St. Lawrence and Ottawa.	East Midland.	Northern Districts.	The Province.
Over 1 year	1895	121,853	149,089	149,637	190,502	168,823	213,791	70,191	32,118	1,095,995
	1894	121,501	151,599	146,322	190,585	162,753	209,022	75,281	28,672	1,086,635
Under 1 year	1895	107,411	145,364	117,977	171,629	139,013	170,432	53,701	24,222	926,740
	1894	107,751	145,160	119,367	169,603	133,147	173,818	60,491	22,033	929,170
Total	1895	229,264	294,453	267,614	362,122	307,836	384,223	123,892	56,340	2,022,735
	1894	229,252	296,759	265,689	360,188	295,900	382,840	135,772	50,705	2,015,805
	1893	244,078	289,953	260,715	353,928	284,314	370,288	139,093	44,909	1,935,938
	1892	210,713	279,092	232,186	340,228	263,950	357,766	124,815	41,719	1,850,473
	1891	194,026	246,168	205,507	328,362	253,063	327,166	103,669	35,510	1,693,751

The total number of sheep in the Province is given as 2,022,735, being 6,930 more than in the preceding year, notwithstanding a slight decrease in the number of sheep under one year. The Lake Huron and East Midland districts are the only groups failing to show as many sheep as in 1894. The largest number of sheep are to be found in the St. Lawrence and Ottawa counties.

Wool Clip. The total number of fleeces, with total and avérage weights, are given in the following table by county groups and for the Province for 1894 and 1895, and also the average of the Province for the fourteen years 1882 95 :

Districts.	1895.			1894.			1882-95.		
	Fleeces.	Pounds.	Lb. per fleece.	Fleeces.	Pounds.	Lb. per fleece.	Fleeces.	Pounds.	Lb. per fleece
Lake Erie	123,008	702,465	5.71	121,042	692,270	5.72	108,864	614,471	5.64
Lake Huron	151,875	877,098	5.78	152.404	892,773	5.86	129,437	749,198	5.79
Georgian Bay	152,246	855,048	5.62	148,834	853,166	5.73	121,358	681,082	5.61
West Midland	192,548	1,130,283	5.87	190,577	1,143,863	6.00	189,084	1,096,556	5.80
Lake Ontario	171,491	1,013,661	5.91	166,139	1,011,977	6 09	158,139	942,846	5 96
St. Lawrence & Ottawa	214,656	1,090,638	5.08	209 627	1,076,910	5.14	215,578	1,070,860	4 97
East Midland	70,776	372,292	5.26	74,736	403,359	5.39	68,105	358,889	5.28
Northern Districts	32,540	173,326	5.33	29,058	160,718	5,53	16,756	93,435	5.58
The Province	1,109,140	6,214,811	5.60	1,092,467	6,235,036	5.71	1,007,321	5,607,337	5.57

There were 16,673 more fleeces in 1895 than in 1894, but the lighter average weight of 5.60 pounds per fleece, compared with 5.71 pounds in the preceding year, has brought the total weight to 6,214,811 pounds, which is slightly below the figures for 1894. The weight per fleece, however, is heavier than the average for the fourteen years, which is given as 5.57 pounds. In the Lake Ontario counties the average weight of a fleece was 5.91 pounds, while in the St. Lawrence and Ottawa district it averages only 5 08 pounds.

Poultry. The season of 1895 was not altogether satisfactory for poultry raisers, on account of the low prices paid for both eggs and dressed poultry. The abundance of grasshoppers was an advantage to those raising turkeys. Farmers were very much divided as to whether there is profit or actual loss in keeping poultry. Many correspondents recognized that poultry have not been given a fair trial, and that the average hen is a victim of neglect.

The table following gives by county groups and for the Province, the number of poultry, by classes, for the years 1894 and 1895, and also the total number for each of the five years, 1891-95 :

Poultry.		Lake Erie.	Lake Huron.	Georgian Bay.	West Midland.	Lake Ontario.	St. Lawrence and Ottawa.	East Midland.	Northern Districts.	The Province.
Turkeys.	1895	83,723	71,490	45,326	141,020	142,872	153,339	49,350	9,484	696,604
	1894	86,793	62,693	51,277	131,323	143,700	158.703	44,279	10,437	689,205
Geese	1895	43,041	51,486	43,454	76,669	82,240	84,583	32,413	6,136	420,022
	1894	42,805	50,417	48,978	76,640	85,516	92,737	34,284	6,830	438,208
Other Fowls	1895	965,488	739,016	547,162	1,319,541	1,334,730	1,179,658	436,337	114,282	6,636 214
	1894	899,448	712,258	551,088	1,290,686	1,272,201	1,169,549	420,127	109,892	6,425,249
Totals	1895	1,092,252	861,992	635,942	1,537,230	1,559,842	1,417,580	518,100	129,902	7,752.840
	1894	1,029,046	825,368	651,343	1,498,649	1,501,417	1,420,990	498,690	127,159	7,552,662
	1893	921,453	764,568	622,164	1,424,418	1,388,009	1,396,371	480,717	116,736	7,114,436
	1892	893,995	776,390	623,988	1,418,000	1,360,248	1,409,098	482,721	114,233	7,078,973
	1891	921,742	785,709	603,837	1,407,686	1,391,488	1,307,506	479,147	108,975	7,006,090

An increase in the number of turkeys in the Lake Huron and West Midland and East Midland districts has been large enough to overcome the decrease in the other five groups, and there are now 7,399 more turkeys in the Province than in the previous year. There has been a falling off of 18,186 in the number of geese, the Lake Erie, Lake Huron and West Midland districts being the only exceptions to the decline. The number of other fowls has increased in every group excepting the Georgian Bay to such an extent that there are 210,965 more in the Province than in 1894. The total number of all classes of fowls now reaches 7,752,840, which is 200,178 more than in the preceding year, and every district but the Georgian Bay and St. Lawrence shows an increase over the figures for 1894.

REMARKS OF CORRESPONDENTS.

Camden, Kent: I think the hen is of far more profit than the turkey, goose or duck, as there is always a market for eggs. But as a rule now a low price has to be taken for poultry.

Chatham, Kent: Every farmer keeps poultry, but in a slipshod fashion. Nothing is done in a scientific manner.

Harwich, Kent: It is a great improvement to get some thoroughbred blood in a flock of fowls occasionally. I have a mixture of half a dozen good breeds, and have a flock of good hens.

Raleigh, Kent: We raise annually about five dozen chickens of Light Bramahs, but never sell any. They are fed twice a day, winter and summer, with wheat, barley and corn, and have the run of the farm. We have plenty of eggs winter and summer, except when moulting. If not actual profit they give abundance in the eating.

Malahide, Elgin: There has been more attention paid to poultry by farmers of late years. They have better bred fowl, and better cared for. The production for home consumption and export probably exceeds that of former years.

Canboro', Haldimand: Geese, turkeys, ducks and hens are the best paying animals on the farm. We have made $50 this summer on eggs alone besides raising a lot of chickens. I breed Plymouth Rocks.

Stamford, Welland: Poultry have done very well this year. There has been very little disease among them. A great many have gone into poultry raising with great profit.

Bosanquet, Lambton: Poultry are abundant in quantity, and are in prime condition. I believe that the hen is about as industrious and honest a servant as the farmer has, and sometimes has to put up with considerable abuse.

Ashfield, Huron: We keep about fifty hens, chiefly for our own use. We regard them as fully paying for their keep. With the present low prices of grain poultry is a paying investment. Brown Leghorn is the choice for laying.

Hullett, Huron: Geese and turkeys are doing well, but paying only moderately. Hens are healthy and have been laying well. They pay well when kept in a clean house, are kept warm in winter and properly fed and cared for.

Stanley, Huron: There is a large stock of poultry, and a large business has been done in eggs during the summer. At present chickens and fat fowl are in good demand, but prices are not high. Though I cannot furnish you with statistics the general opinion is that they pay

Amabel, Bruce: Poultry are mostly in good condition. If there is any profit in poultry at present I would like some person to show me where it is to come from, as they were never so cheap in twenty five years.

Brant, Bruce: Although the price of eggs has been no better than last year, they are as profitable as anything else on the farm. In many localities grasshoppers were very numerous, and caused a great deal of danger, yet they provided abundant feed for turkeys, and they did extra well.

Artemesia, Grey: The poultry industry would pay if rightly managed, but the trouble is that they are allowed to pick their own living all the time possible, and after that are fed begrudgingly.

Bentinck, Grey: Poultry fanciers may find pleasure if they do not find profit, in keeping poultry, but the general farmer has no profit in keeping any more than sufficient to supply his own table with eggs and fowl.

St. Vincent, Grey: Fowl are generally in good condition, as grain is so cheap there is no object in stunting them. Where proper care is taken, hens for egg production are as profitable, if not more so, than any other class of stock on the farm.

Sydenham, Grey: Raising poultry for sale, I am convinced, does not pay except near large cities, where farmers can watch for supply and demand. Turkeys are worth only six cents a pound here, and only a limited number can be sold just now, even at that price.

Gwillimbury, W., Simcoe: They seem to be in very good condition, but as they are generally kept by farmers, I confess I cannot discover wherein they are profitable, except that it is very convenient to have a fresh egg occasionally.

Dorchester, W., Middlesex: Poultry have done fairly well, but the low price of eggs scarcely pays for the labor they require. There seem to be larger flocks of turkeys than last year, but the birds are rather smaller in size.

McGillivray, Middlesex: Poultry are in good condition. The average price of eggs would not exceed ten cents. Eight and nine cents was the price for the three summer months.

Zorra, E., Oxford: Turkeys and ducks are numerous and are doing well. They pay to raise, considering the grasshoppers they eat.

Zorra, E., Oxford: Some poultry will always be kept on the average farm. About fifty to sixty are plenty, and the chief profit in keeping them is in their supplying a cheap and handy food, and as destroyers of a quantity of injurious insects, worms, etc.

Brantford, Brant: Poultry, if properly cared for, should be among the money making machinery of the farm. There seems to be no depression in the trade. There is a ready market all the season, which says so much in cash every time for a little outlay.

Oakland, Brant: Poultry have always been profitable with me. Like everything else they require care and attention; otherwise they are not profitable—only scavengers.

Blanshard, Perth: The hens look well and lay lots of eggs. It is the women who run that branch of the farm. I often think as I look in the holes made in the grain bins that the eggs cost more than they are worth.

Wallace, Perth: I have always maintained that there was no profit in poultry, excepting in keeping them to pick up such as would go to waste if they were not about.

Eramosa, Wellington: One hundred hens are better than six cows; that is, they bring more money with one-half the outlay.

Luther, W., Wellington: The supply of eggs has been large, and generally thought profitable. But as no accounts are kept, it is impossible to give exact figures. There have been some losses from roup owing to poor buildings.

Dumfries, N., Waterloo: Poultry on the whole give much better returns than they generally get credit for. It has been a first-class year for the turkey, but a new trouble has struck a number of them, namely, a swelling about the eye. I have operated on some the second and third time, by letting the matter out with a pen-knife. There have been no deaths yet.

Waterloo, Waterloo: I am satisfied that chickens pay good profits on any farm if they are properly cared for. Other fowls hardly pay as well. Most farmers make a great blunder by mixing all breeds of chickens, instead of keeping one general purpose breed, and improving on that.

Mulmur, Dufferin: The condition of poultry seems to be good. A large quantity are being put on the market. Cause: scarcity of feed and lack of funds. The prices are much lower than usual, and therefore the profits are less.

Nassagaweya, Halton: Poultry have done well, as grasshoppers were so plentiful that they had no difficulty in getting food. Eggs have also been plentiful. They are said to have been delicious, owing to the peculiar grasshopper flavor. I cannot vouch for this, however, as I do not fancy experimenting on such dainties

Trafalgar, Halton: The market for poultry products has been about equal to the last and previous years. Only a few farmers appreciate the value of the poultry yard, and it does not receive the attention or the care that it is entitled to Those who do attend to their fowl, profit by the delinquincy of the others.

Chinguacousy, Peel: Poultry raising has become quite an industry in this township. The results are satisfactory. The dry summer has been very favorable to growing turkeys and chickens, which are nearly all marketed in Toronto.

Markham, York: Poultry are in fair condition. If not gone into extensively, with proper care poultry raising will pay about as well as any other farm stock, and sometimes even better.

Mara, Ontario: All kinds of poultry are healthy and in good condition. There has not been much profit in selling eggs during the past summer.

Clarke, Durham: Farmers as a rule do not know what their poultry cost. It would be hard to give an estimate of profit or loss, but I think there is profit in farmers keeping enough for their own use, especially hens.

Percy, Northumberland: Poultry are in good condition. They forage for a living, helping themselves to grain, fruit and whatever they take a fancy to. I think profit is on the wrong side.

Marysburgh N., Prince Edward: I do not take much stock in poultry myself. Hens pay for their keep if properly cared for. Ducks are worth 25 cents dressed. It is worth 20 cents each to fit them for market, and it costs 25 cents in my opinion to raise one. Now, where is the profit?

Kingston, Frontenac: There is no scarcity of good poultry in this locality, being in good demand for table use at remunerative prices. The same may be said of eggs. Under proper care poultry are profitable.

Storrington, Frontenac: All kinds of poultry have done well. If farmers would keep more fowl and pay good attention to them they would derive more profit from the food consumed than they get from any other stock. Eggs and dressed fowls always bring a good price on our market.

Leeds and Lansdowne Front, Leeds: Poultry has been gone into more than formerly, as there is profit in the business when well managed. I think the industry should be encouraged more at this locality, as we are right at the Thousand Islands, and campers look for lots of chicken.

Lansdowne Front, Leeds: The poultry industry is on the increase as the farmers see that it pays to raise them and to give them careful attention.

Edwardsburg, Grenville: Poultry has done very well this year, but the profit is not great on account of the low price for eggs.

Caledonia, Prescott: Every farmer keeps a number of different kinds of poultry. As to their profit, I fancy the most of us do not know the first thing. We simply go on keeping them for the enjoyment of fresh eggs and fat cockerels.

Hawkesbury E., Prescott: Poultry has paid very well. Eggs have been a pretty good price this season. Farmers are paying more attention to the breeds of fowl, and are erecting suitable houses for them to live in.

Clarence, Russell: There are none here who make a specialty of poultry of any class. The common hen is generally kept as a scavenger and egg producer for home consumption; otherwise not directly profitable. Carelessness in breeding, feeding and housing is probably the cause. Plymouth Rocks are most popular with those who take best care, and try to make them a financial success. Turkeys are raised to some extent. The Mammoth Bronze is profitable, as it finds a great deal of its food in the fields, grows to a great size, and matures early. Mongrels or run out breeds are not profitable. Geese and ducks are not raised about here.

Osgoode, Russell: I think there is nothing on the farm, with the exception of sheep, which yield as large a revenue as hens, considering the labor expended on them. There is no profit in other fowls.

Drummond, Lanark: Poultry are in good condition, but, except in places where they are provided with good warm quarters and furnished with proper food and attendance, there is not much profit in them. As a rule very little care is taken of them.

Laxton, Victoria: Poultry are in good condition. A neighbor that keeps a hennery says that 100 hens are equal to five cows for profit.

Otonabee, Peterborough: On my own farm, poultry pay for their feed and care as well as any of the other animals kept on the farm.

Lutterworth, Haliburton: Lots of fowl are kept for home use, and a large portion to spare. Ask farmers if fowls pay for their keep, nine out of ten will answer, "I don't know." And I am one of the nine.

Tyendinaga, Hastings: Farmers are beginning to realize the profits to be derived from poultry, and are turning their attention that way. A number are building good warm houses for them.

Wollaston, Hastings: There is no profit in poultry. Eggs sell at 8 cents in summer, and 15 cents in winter, when few are laid. We raise eggs for the house, and these cost us a cent apiece.

Cockburn Island, Manitoulin: All keep a few poultry, but none make a special business of it. Opinions differ as to the profit. Farmers permit a few fowl about the barn, but are reluctant to credit them with much profit.

LIVE STOCK SOLD. The following table gives the number of each class of live stock sold in 1894 and 1895, by county groups and by the Province

Live stock sold.		Lake Erie.	Lake Huron.	Georgian Bay.	West Midland.	Lake Ontario.	St. Lawrence and Ottawa.	East Midland.	Northern Districts.	The Province.
Horses	1895	5,107	5,295	4,040	8,047	8,282	6,327	2,158	790	40,346
	1894	5,802	6,549	3,808	8,063	8,277	6,782	2,360	775	41,916
Cattle	1895	44,911	70,730	40,347	107,892	68,477	57,134	21,103	7,537	418,131
	1894	49,351	72,326	41,254	114,873	71,520	60,671	24,130	7,573	441,698
Sheep	1895	80,814	102,532	81,237	133,430	116,092	122,727	32,056	13,427	682,315
	1894	74,469	90,722	75,443	119,109	97,312	111,850	35,581	11,960	616,446
Hogs	1895	199,763	119,161	100,214	282,439	241,041	132,214	70,080	15,081	1,159,992
	1894	177,840	100,775	91,233	250,379	210,391	117,719	68,003	14,227	1,030,567
Poultry	1895	394,743	233,530	177,200	456,641	551,444	407,872	134,512	37,126	2,392,458
	1894	349,978	200,411	165,976	393,581	479,041	381,249	126,401	34,585	2,131,222

Taking the Province over there were fewer horses and cattle disposed of during the year than in 1894, but there were more sheep, hogs and poultry. Every district shows an increase in the number of hogs and poultry marketed, and all but the East Midland an increase in the number of sheep sold; while every group exhibits a decline in the number of cattle disposed of, and all but two a decrease in the number of horses changing hands.

THE APIARY.

Spring reports were to the following effect: Many colonies went into winter quarters with short stores, and losses from this cause were considerable. Losses from outdoor wintering were greater than usual, and the cold weather of May and the backward condition of blossoms and flowers tested the vitality of colonies. A few reported losses from chilled brood and dysentery; only three or four correspondents reported foul brood. Losses were given all the way from two to ninety per cent. The average may be placed at twenty per cent.

The following was in the August bulletin: "Leading apiarists among our correspondents report dolefully regarding honey. One in Huron, who has 110 colonies, had but one swarm, and did not get a single pound of honey up to the time of reporting. Many others complain of lack of swarming, and fear that after feeding back there will be little or no profit. Others hope better things from the fall flow. The best reports come from the St. Lawrence and Ottawa and East Midland groups, but these are not unanimous. No disease has been reported, and more loss is feared from starvation than from any other cause. A Grey correspondent sized up the general situation in the following terse report: 'No swarms, no sickness, no honey.'"

The November bulletin said: "The discouraging account published in the August bulletin regarding the poor prospects of a honey yield has been verified. There will be a small surplus from buckwheat, and still less from clover. Unless apiarists feed back heavily many colonies will die of starvation. With the exception of having low stores the bees appear to be in good condition."

The following table gives by county groups and for the Province the number of hives of bees kept in the township municipalities of Ontario in each of the four years 1892-95, together with their value, including the outfit required, in each of the three years 1893-95:

Bees.		Lake Erie.	Lake Huron.	Georgian Bay.	West Midland.	Lake Ontario.	St. Lawrence and Ottawa.	East Midland.	Northern Districts.	The Province.
		No.	No.	No.	No	No.	No.	No.	No.	No.
No. of hives ..	1895	27,264	18,368	11,708	23,625	36,023	43,880	11,013	1,292	173,173
	1894	36,019	25,159	14,644	29,146	39,544	46,231	8,094	1,257	200,094
	1893	37,816	27,758	14,019	31,244	38,594	46,382	8,161	1,166	205,168
	1892	36,191	28,924	12,030	28,201	38,672	43,730	7,064	1,010	195,822
		$	$	$	$	$	$	$	$	$
Value of bees and outfit ..	1895	148,386	104,990	60,630	140,489	198,504	217,098	60,884	7,677	938,658
	1894	179,126	139,685	78,575	167,578	207,983	226,867	44,857	6,903	1,051,574
	1893	201,855	186,265	72,663	209,213	222,465	220,952	42,569	6,963	1,162,945

There has been a decrease in the number of hives in six districts out of the eight, and there are now only 173,173 colonies compared with 200,094 in the preceding year. The total value of bees and outfit has fallen from $1,051,574 in 1894 to $938,658. This heavy decline, following a similar one in the year before, leads to the conclusion that the honey industry has not been a paying one during the past few seasons.

Remarks of Correspondents.

Gosfield N., Essex: I think the cause of so many bees dying during the winter among those not protected by chaff or sawdust was that the moisture that arises from the cluster was formed into hoar frost by the long continued cold, and it gradually spread from the top of the hive until it covered the bees. Where they were covered with sawdust, and a porus quilt only between the bees and sawdust, the moisture was all absorbed by the sawdust, and the bees were kept dry; and where bees are kept dry, cold will not kill them.

Gosfield, N., Essex: Bees are all right now. There has been a fair flow of fall honey, which has left them in good shape for winter. There is no surplus honey, and there were very few swarms.

Tilbury N., Essex: Bees are healthy, and will probably have enough honey to carry them through winter and spring; but for the first time since I began to keep bees I have got no surplus—well, perhaps one pound to the colony, and that principally from basswood.

Oxford, Kent: Bees have given no surplus at all this year, and in many cases have not gathered enough to winter on.

St. Thomas, Elgin: Bees did not gather enough honey for winter in this locality, and have been fed. In some places they got winter stores from buckwheat. On the whole it was the worst season I have known in fifteen years.

Wainfleet, Welland: Bees have done very poorly. There have been hardly any swarms, and owing to late frosts but little honey was made.

Stanley, Huron: This has been a poor year for bees. Some bee-keepers here have not had a single swarm, and have no honey.

Wawanosh W., Huron: Bees have produced no honey this season and no swarms. They have all to be fed heavily, and a great many are left to starve, for it would not pay to feed them, as they were in a weak condition or few in number.

Brant, Bruce: A complete failure. No swarming and no surplus honey. Many have been and are being fed to keep them over winter. Frosts and drouth were the cause.

Elderslie, Bruce: This has been a remarkably poor season for bees. Very few bee men extracted any honey this season. Most of the colonies will have enough honey to take them through the winter perhaps, but that will be about all.

Glenelg, Grey: There was no honey product this year. Bees did not get enough to keep themselves, and had to be fed for winter.

Sydenham, Grey: Bees are in a healthy condition. Hives are well supplied with honey, and from thirty to thirty-five pounds have been extracted.

Lobo, Middlesex: There are no swarms and no honey. Fully one-half the bees here will die of starvation this winter unless fed back.

Zorra E., Oxford: There has been no honey and no swarms. When the bees should be gathering honey on basswood several died of starvation. They did not gather enough to keep them one month.

Brantford, Brant: No honey has been gathered this year. Nearly all the hives have to be fed to winter them over.

Eramosa, Wellington: At one time this summer I had six hives of bees, but they are all dead of starvation. No bloss m; no honey.

Waterloo, Waterloo: This summer was a stunner on bees in this section. There has been no honey and bees have had "hard scratching" to exist. Some will have to be fed for the winter.

Mulmur, Dufferin: This year has been disastrous to the bee industry. There were few swarms and less honey. My colonies doubled this year. I am feeding a few of the best but have little hope of bringing them through.

Glanford, Wentworth: Bees have just barely lived. There was no increase. Colonies will have to be fed their entire winter's sustenance.

Chinguacousy, Peel: No swarms; not honey enough to winter upon. The worst season I have ever seen.

Etobicoke, York: Bees look healthy. The surplus is about ten pounds per colony.

Clarke, Durham: Bees have not done much in bright honey this year, on account of lack of white clover and the very dry summer. Very little swarming this year.

Haldimand, Northumberland: The swarming has been very light, and in some instances none. The honey stored has been light on account of the drouth.

Williamsburg, Dundas: Bees have made no honey this season, not even enough to keep themselves, and most of them will die before spring. A number of years ago this was a fine section of the country for bee-keeping, but of late years it has gone to the dogs, from what cause I am unable to say.

Clarence, Russell: With the exception of two or three weeks in May the season was good for bees and production of honey. Fruit trees are somewhat backward in spring and cold weather. All the other sources of bee food were plentiful with the exception of buckwheat, and the weather was all that could be desired for them.

Otonabee, Peterborough: Bees have not done well this summer. The colonies did not swarm, and the honey product was only about half. There was not much flora.

Emo River, Rainy River: As to bees, I do not know of a single colony in the whole district. I feel sure they would do well here. The climate is dry in winter, and there are many more fine sunny days to give them a fly in winter than in the east. It is not so damp for the hive, and from early spring to late fall flora is in abundance, as well as the various trees from which to obtain honey. Clover is abundant. There is also a special guide that tame bees will succeed in the fact that wasps and wild bees are to be seen in the meadows, etc. I used to keep bees in eastern Ontario, and had intended to remove some here when we came, and it was only by accident that it was not done. I believe the Department should send some colonies of bees into this district for experimental purposes.

THE DAIRY.

The August bulletin called attention to the marked decrease in the flow of milk, and in different parts of the western half of the Province cheese factories and creameries had to close for lack of material.

The following was contained in the November bulletin: "The drouth affected pastures to such an extent that cheese factories and creameries experienced a heavy falling off in supplies. Most factories closed this year earlier than is usual, and creameries also had a trying time of it. Prices were low the most of the season, and the year has been a disappointing one to dairymen. Home-made butter is said to be still improving in quality, thanks to the influence of creameries and the travelling dairy. Most of our correspondents still express confidence in the cheese industry. The grade Durham continues to be regarded as the favorite cow, the Ayrshire comes next (leading in eastern Ontario), while the Jersey and the Holstein follow closely."

Remarks of Correspondents.

Colchester N., Essex: Cheese factories have been well patronized, but the business has not been satisfactory. The price of cheese has been so low, and pastures being short, the quantity of milk was limited, although a large number of cows were milked. Butter would have been better.

Gosfield N., Essex: Three cheese factories were erected in this section during the past year.

Harwich, Kent: Four different men have tried a factory in or near Blenheim, and have failed. The factory was run for about two months, cheese selling at 7½ cents, but was closed in July, and has not been re-opened.

Howard, Kent: There is but one cheese factory in this township where there used to be ten or twelve in operation about ten years ago. Cheese cannot be made here for less than 10 cents a pound. We became discouraged and quit, for we find beef cattle more profitable, and both cannot be carried on at the same time.

Raleigh, Kent: Dairying is in a flourishing condition and good prices have been realized. The visit of the travelling dairy has borne good fruits.

Malahide, Elgin: It has been a poor season for the dairy. Drouth and the low price of cheese have lessened profits.

Dunn, Haldimand. The dairy industry is doing very well. The butter business is increasing faster than that of cheese, owing to our nearness to the Buffalo market.

Seneca, Haldimand: The dry summer caused poor pasture, and cheese and butter have not been so profitable as in previous years, as the prices also have been lower. Butter has done better than cheese.

Bosanquet, Lambton: This was rather a hard year on dairying, pastures being so bare all summer and prices poor. There is a considerable amount of cheese manufactured here, and it takes the lead of butter everytime.

Dawn, Lambton: The dairy industry in this locality is confined to private individuals. No doubt there is a very marked improvement on the butter made heretofore, and certainly there has been room for it. Some think that butter pays best. Although the hot weather is favorable to butter-making, still it leaves the milk on the farm, which is a great factor in raising calves and pigs. The price of butter is two cents a pound higher than this time last year.

Colborne, Huron: Most of the farmers in this township have practised dairying, either sending their milk to the cheese factory or their cream to the creamery, and there are fewer fat cattle than formerly. Prices for butter not being encouraging, no doubt many will give up dairying.

Grey, Huron: Cheese has been very low during the summer, but is better now. Most of the live farmers go in for cheese instead of butter.

Hullett, Huron: The dairy industry has been very depressed. No creamery has been running this year. Butter sold for about 11 cents per pound in summer, and cheese from 6½ to 7½ cents per pound, but the make has been short on account of dry weather.

Turnberry, Huron: The returns from the dairy will be very small, as pastures were so poor. Very little butter is made as compared with cheese.

Amabel, Bruce: It has been a poor year for the dairy industry. The drouth and the flies have greatly lessened the supply of milk. The price of butter and cheese has been very low. Some prefer butter, others cheese, for profit. I think there is not much difference between them.

Amabel, Bruce: This has been a very unpropitious season for dairying. The summer was so dry that the cows in many cases almost dried up. And then the almost unheard of low price of cheese—and that is what most are engaged in. Our cows have barely paid for the trouble of milking.

Brant, Bruce: On account, I think, of the low prices prevailing in the early part of the season, the dairy industry has lagged somewhat, but I think a better quality has been made. Cheese has been engaging the attention of farmers more, but I do not know what effect the lower prices of this year may have. The quality of butter is as good, or better, than formerly, but prices have been considerably lower—about 3 cents a pound less.

Elderslie, Bruce: More attention is being given to dairying than formerly. Cheese factories are now more in favor than creameries. The whey is being returned to farmers, and, mixed with meal, makes good food for hogs.

Greenock, Bruce: Cheese takes the lead on account of the easy way of disposing of the produce of the cow; and it seems to bring in the greatest amount of ready cash.

Derby, Grey: The dairy industry has not been very profitable this season, as the market has been low. There is much more butter made than cheese in this vicinity.

Glenelg, Grey: The dairy interest suffered from drouth like everything else. Both butter and cheese have been low in price, as well as small in quantity. Durham grades are almost entirely used for dairy purposes.

Sydenham, Grey: Most of the butter was made in the factories at Owen Sound, the cream being gathered from the surrounding country.

Sunnidale, Simcoe: The majority of farmers about here think that butter making pays best, taking the skim milk and everything into consideration.

McGillivray, Middlesex: The dairy industry is not in a satisfactory condition, and never will be until butter is made in creameries the same as cheese. The township loses thousands of dollars every year that it might make if butter was up to the gilt-edged standard of Danish or Australian.

Westminster, Middlesex: There has been a small production of dairy produce and low prices. We generally stick to the cheese factory. We are waiting to see how the butter market experiment will succeed. The quality of our butter is all right.

Westminster, Middlesex: Dairying has been the poorest for years, and cows are cheap. Butter was ahead this year, but is not likely to be so next. Cheese factories will find it difficult to keep their patronage next year.

Blandford, Oxford: The county of Oxford is a dairy county; but cheese, and not butter, was and still is supreme.

Brantford, Brant: The condition of the dairying industry has been from bad to very bad. Butter has paid the best this season. No pasture, bad prices and hot weather have hurt the cheese industry immensely.

Brantford, Brant: Owing to the dry season pasture was dried up. In most cases no green feed was sown, and therefore the dairy industry was rather small.

Blanshard, Perth: There has not been so much done in the dairy line as usual. The butter factory has been closed this season, owing to the owner and the patrons being unable to agree upon a basis of manufacture. The cheese factory has been running, and has done a fair business. Prices have been below last year's rates.

Eramosa, Wellington. Butter is mostly gone, as the production was small owing to dry weather. There are many complaints from cheese factories as to low prices and shortage of milk.

Guelph, Wellington: Two cheese factories were in operation in this vicinity during the past summer, but they were not very largely patronized.

Minto, Wellington: Farmers are badly discouraged about the dairy industry. Butter has been relatively higher than cheese. The price of butter has been a little better, but the quality has been about the same.

Waterloo, Waterloo: In this section dairying is mostly in the line of butter for the local town markets, although there was a cheese factory started near by last spring.

Amaranth, Dufferin: It has been the poorest year for cheese in twelve years. There has been little milk, and small price for cheese. Butter has not been much better.

Mulmur, Dufferin: The turn out of butter has been less than usual. Two reasons for this may be given—the drouth and the increasing production of cheese.

Beverly, Wentworth: Cheese making has been a very poor business this season on account of low prices and drouth. Butter has paid better this summer.

Glanford, Wentworth: The dairy interest is steadily growing. Butter is chiefly made. Some milk is being sent into the city, and this branch is increasing yearly.

Esquesing, Halton: There are no cheese factories in this locality. A creamery was started on the separator plan last spring near Georgetown, but it has not given general satisfaction, as the hauling of the milk to the factory and returning the skim milk is regarded as too expensive.

Markham, York. More have gone into dairying this year. Butter has the preference at present.

Brock, Ontario: I think the butter industry has held its own well with the cheese this season. The quality of butter has compared well with previous years, but prices were lower all season until lately.

Pickering, Ontario: I think the advantages of factories and creameries cannot be too strongly pressed upon the attention of farmers, when we consider the depression in other lines. A few farmers here built a creamery last spring in a good dairying country, but our great difficulty has been to get patrons. Farmers seemingly are afraid to move out of the old lines. Although the creamery is built and we have the best appliances for making butter, yet we could not convince farmers to bring them milk, and consequently can not get enough milk to make the undertaking profitable.

Mara, Ontario: Dairying has been in a depressed state during the summer. Butter has been paying better than cheese.

Scugog, Ontario: The supply of dairy produce has fallen off very much. The drouth has been very bad, which has no doubt affected the flow of milk.

Darlington, Durham: We have no butter factories in this township, but there is a large amount of cheese manufactured here. On the whole we do not think the dairy industry was quite as good as last year.

Hope, Durham: The dairy industry has not been equal to expectations, as far as cheese manufacturing goes, on account of low prices prevailing in foreign markets; and the quantity manufactured has not been up to the average of the last few years, owing to the shortage of pasture through drouth.

Hamilton, Northumberland: There are several cheese factories and a butter factory in this township. More cheese is made than butter.

Marysburgh N., Prince Edward: The dairy business is at ebb-tide. Cheese is low in price, and pastures have been poor. The business is now practically at a standstill.

Camden, Lennox and Addington: The bottom has fallen out of the cheese market, and this means a great loss to the farming community. It will be the means of driving some of them into something else next year. Some farmers threaten to run their cows dry in the spring and beef them.

Denbigh, Lennox and Addington: We tried cheese-making this year but with unsatisfactory results. Owing to the low price of cheese, the high rate of milk-drawing owing to the scattered population, the small number and inferior condition of the cows kept by many, and the distance we had to draw the cheese to the railway station (42 miles), the amount left to the patrons was very small. Those who made butter did better with the same number of cows.

Richmond, Lennox: Dairying has been the worst for years. The production next season will be much smaller because of low prices ruling this season. Butter production during the summer does not compare favorably with that of cheese.

Crosby N., Leeds: We have five cheese factories in this township, but no butter factory. Good butter is almost one of the lost arts, except in the butter factory. The girls all want to play the piano or else teach school.

Williamsburg, Dundas: The dairy business has been very poor owing to the scarcity of pasture. Butter is not made to any extent hereabouts, not one farmer in a dozen making more than enough for his own use. Cheese is all the go.

Alfred, Prescott: There is not much butter made here. It is all cheese-making with the exception of one creamery here on the second concession, which has not made much butter this year. Prices are very low.

Hawkesbury, Prescott: The farmers in this township nearly all send milk to the cheese factories. In the early part of the summer butter was very low, but it improved later in the season. The only market for butter here was in the villages and to the farmers who send all their milk to the cheese factories. Butter has been better in quality than last year.

Clarence, Russell: Nearly all stock raisers patronize the cheese factories during the cheese season. Breeders of heavy pure-bred stock feed most of the milk to calves, and make the surplus into butter, which is generally of fair quality. Not much of it goes on the market. After the cheese season closes the butter made is not much more than sufficient for home consumption, and much of it is unfit for the market. The larger farmers who have cows coming in at all times of the year, make a considerable quantity of good, marketable butter.

Cumberland, Russell: Cheese is the principal industry here from May until November. Then there is a great deal of butter made, and in a great deal better manner than heretofore.

Gloucester, Carleton: The milk has nearly all gone to the cheese factory. There has not been much butter made, but it has been a better paying article than cheese this summer, as the price has been better than last year.

Osgoode, Carleton: The cheese manufacturing business is becoming more extensive. Your correspondent can now count over a dozen factories within a radius of about five miles from where he writes.

Dalhousie, Lanark: Milk has fallen off thirty-five per cent. on account of dry pasture and hornfly.

Drummond, Lanark: Almost every farmer in the township sends milk to the cheese factory, and consequently there is not much butter made until the cheese season closes. Butter is rather improving in quality.

Laxton, Victoria: People are going more into butter-making every year. Storekeepers state that they are getting a far better quality than used to be made. There is no cheese factory here.

Verulam, Victoria: I should say that the dairy industry was very much depressed. Many more send their milk to the cheese factories in preference to making butter at home, but both branches have been disappointing this season.

Harvey, Peterborough: Farmers are improving in butter-making, using dairy churns, good fine salt, and exercising better care in handling milk and cream since the travelling dairy visited us. Butter has been better both in quality and price.

Tyendinaga, Hastings: Cheese ruled low in price all season. There is only one creamery in this township. Cheese is the main output in dairying.

McKellar, Parry Sound: Butter is scarce, as the yield was not so great as usual, and more cheese is being made in the district.

St. Joseph, Algoma: Poor butter is now the exception here—indeed I may say there is none of poor quality made, thanks to the travelling dairy.

CHEESE FACTORIES. The following table gives the statistics of 1,164 cheese factories operated in Ontario in 1895. These figures are given by groups of counties and are estimated from returns received from 721 factories. Comparative figures are given for the Province for thirteen years:

Districts.	Number.	Quantity of		Gross value of cheese.	Average number of patrons.	Milk required to make one lb. of cheese	Value of cheese per 100 lb.	Amount paid to patrons.	
		Milk used.	Cheese made.					Total.	Ave. per 100 lb. of milk
		lb.	lb.	$		lb.	$ c.	$	cts.
Lake Erie:									
1895	82	84,786,648	7,694,602	597,190	6,643	10.99	7 76	462,630	54.7
1894	77	74,897,984	6,917,462	661,921	5,697	10.83	9 57	542,132	72.4
Lake Huron:									
1895	63	58,165,551	5,283,936	426,059	5,436	11.01	8 06	322,606	55.5
1894	57	54,805,536	5,033,613	482,580	4,929	10.89	9 59	383,751	70.0
Georgian Bay:									
1895	37	17,588,586	1,603,591	125,209	2,179	10.97	7 81	88,471	50 3
1894	36	16,835,065	1,571,673	148,697	1,781	10.71	9 46	113,281	67.3
West Midland:									
1895	150	229,771,579	20,842,027	1,655,304	12,164	11.02	7 94	1,332,143	58 0
1894	134	224,380,507	20,716,487	2,004,396	10,486	10.83	9 68	1,682,828	75.0
Lake Ontario:									
1895	105	107,499,761	9,836,600	766,030	7,451	10.93	7 78	584,474	54.4
1894	96	86,998,988	8,130,737	778,571	5,934	10.70	9 58	632,425	72.7
St. Lawrence and Ottawa:									
1895	572	534,670,093	50,702,830	3,997,798	24,907	10.55	7 88	3,287,864	61.1
1894	471	443,037,209	42,797,773	4,186,021	20,163	10 35	9 78	3,576,710	80.7
East Midland:									
1895	150	140,902,089	13,186,609	1,033,391	6,771	10.69	7 84	840,736	59.7
1894	138	126,140,901	12,071,468	1,174,651	5,803	10.45	9 73	996,695	79.0
Northern Districts:									
1895	5	824,285	80,145	6,408	110	10.28	7 99	4,038	49.0
1894	2	481,641	45,334	4,410	46	10 62	9.73	3,200	66.4
The Province:									
1895	1,164	1,174,008,592	109,230,340	8,607,389	65,661	10 75	7 88	6,922,962	59.0
1894	1,011	1,027,577,831	97,284,547	9,441,247	54,839	10.56	9 70	7,931,022	77.2
1893	897	911,791,204	86,166,719	8,338,709	50,870	10 58	9 68	..	..
1892	856	984,356,444	93,848,948	8,959,939	48,601	10 49	9 55	..	..
1891	838	865,153,574	81,029,042	7,656,484	45,066	10.56	9 35	..	..
1890	817	836,387,516	79,364,718	7,189,957	44,888	10 54	9 06	..	..
1889	784	760,146,937	72,592,847	6,787,619	43,215	10 47	9 35	..	..
1888	737	686,369,013	65,200,751	6,031,470	42,065	10.51	9 24	..	..
1887	737	691,934,579	65,638,636	6,918,913	42,512	10 54	10 54	..	..
1886	770	684,703,243	65,771,621	5,893,818	37,665	10 27	9 25	..	..
1885	752	733,437,254	71,209,719	5,781,569	44,208	10.30	8 12	..	..
1884	761	685,964,727	66,939,573	6,008,889	38,646	10 25	10 46	..	..
1883	635	539,696,197	53,513,032	5,589,339	32,436	10 08	10 45	..	..
Average 1883-95.	827	811,678,962	77,441,491	7,245,795	45,448	10 48	9 36	..	..

The number of cheese factories operated in Ontario in 1895 was 1,164, or 153 in excess of the previous year. The number of factories has increased by about 50 per cent. since 1889. Nearly fifteen millions of gallons of milk were used more than in 1894, and the output of cheese was 109,230,340 pounds in 1895 as compared with 97,284,547 pounds in 1894, showing an increase of about twelve million pounds, yet the value of the cheese produced fell from $9,441,247 in 1894 to $8,607,389 in 1895, or a reduction of $833,858. It took on the average 10.75 pounds of milk to make one pound of cheese in 1895 as compared with 10.56 in 1894, the average for the thirteen years being 10.48. The price of cheese fell from $9.70 per 100 pounds in 1894 to $7.88 in 1895, the average for the thirteen years being $9.36. The 65,661 patrons received only $6,922,962 in 1895, or an average of 59 cents per 100 pounds of milk, while 54,839 patrons secured $7,931,022 in 1894, or an average of 77.2 cents for 100 pounds of milk.

Monthly Statistics of Cheese Factories. The following table has been compiled from returns of cheese factories which give full monthly statistics. The number used for 1895 was 155 factories, whose output was 17,778,933 pounds of cheese. The number used for 1894 was 158 factories, whose output was 16,989,246 pounds of cheese. The 100 reporting for 1893 produced 11,849,642 pounds:

Months.	Milk required to make one pound of cheese.			Gross value of cheese per pound.			Gross value of product of 100 lb. of milk.			Per cent. of cheese made in month.		
	1895	1894.	1893.	1895	1894.	1893.	1895.	1894.	1893.	1895.	1894.	1893.
	lb.	lb.	lb.	cts.	cts.	cts.	cts.	cts.	cts.			
March	...	.....	10.43	.....	.....	10.31	..	.....	98 8	.....	....	.1
April	11.36	10.89	10.91	7.07	10.27	9.89	62.3	94.3	90.6	2.2	1.7	1.3
May	10.90	10.50	10.77	7.12	9.49	9 26	65.3	90 4	86.0	16 4	14.3	12.0
June	11.20	10.79	10.87	8.06	9 01	9.14	72.0	83.5	84.1	21 3	21.2	23.3
July	11.39	11.23	11.03	7.64	9.30	9.35	67.1	82.8	84.7	18.3	19.0	20.7
August	10.99	10.89	10.89	7.63	10.24	9.99	69.4	94.0	91.7	16.0	16.0	16.0
September	10.52	10.18	10 08	8.47	10.28	10.58	80 5	100.9	105.0	13.2	12.3	13.9
October	9.47	9.52	9.46	8.75	10.26	10 59	92 4	107.7	112.0	10.6	12.4	10.6
November	9.40	9.32	9.02	8.77	10.04	10.84	93.2	107.7	120.2	1.9	2.8	2.0
December	9.31	8.09	8.57	8.34	9.55	10.50	89.5	106.9	122.5	.1	.3	.1
The season	10.84	10.57	10.60	7.88	9.69	9.73	72.7	91.7	91.8	100	100	100

The average of each year shows that the milk is poorest in July, while it gains in richness till the end of the season. The greatest amount of cheese is made in June. July comes second, while May steps into third place in 1895, previously held by August.

Creameries. The following table gives the statistics furnished by 53 public creameries for 1895, showing the quantity and value of butter made, the average number of patrons and the average price per pound; of the 53 creameries making returns 22 are operated in summer, 16 in winter, and 16 are going all the year, from twice a week up:

Creameries.	No of returns.	Butter made.		Average number of patrons.	Average price of butter per pound.	Milk required to make one pound of butter.	Cream required to make one pound of butter.
		Quantity.	Value.				
		lb.	$		cts.	lb.	lb.
Summer	22	795,804	144,101	2,511	18.11	24.74	4.18
Winter	15	294,729	58,322	675	19.79	23.72	.....
All the year	16	1,101,993	215,687	1,467	19.57	25.11	4.04
Total—							
1895	53	2,192,526	418,110	4,653	19 07	24.75	4.15
1894	39	1,072,517	224,695	2,814	20 94	23.79	4.00
1893	37	1,353,785	287,078	3,926	21.21	23.58	4.28
1892	29	1,867,758	384,576	4,246	20 59	25.21	4.25
1891	30	1,402,309	287,559	3,292	20.51	24 61	4.15

The number of creameries (including skimming stations) operated in Ontario is about 135. The statistics in the above table are only for those creameries that have made returns to the Bureau. The number reported for 1895 is 53, or 65 if we count the skimming stations. Based upon the number of creameries, the butter made at all the public creameries of the Province may be estimated at 4,553,708 pounds.

CHEESE FACTORIES AND CREAMERIES IN ONTARIO.

CHEESE FACTORIES IN OPERATION IN ONTARIO DURING 1895, WITH NAME AND POST OFFICE ADDRESS OF THE SECRETARY OF EACH FACTORY.

NOTE.—No return received from factory marked with asterisk (*); new factories in 1896 (†).

County and Township.	Name of factory.	Name of secretary or other officer.	Post office address.
ESSEX:			
Anderdon and Malden	Essex Union	F. W. Falls, Treas	Amherstburg.
Colchester, S	Erie	George Pearse, Sec	Harrow.
Gosfield, N	Gosfield, N	Peter Inman, Sec	Cottam.
Gosfield, S	*Kingsville	R. J. Graham, Prop	Belleville.
Mersea	Blytheswood	F. A. Leak, Prop	Blytheswood.
	*Leamington	Operated May 1—Aug. 15.	
	†Mersea and Romney	George Robinson, Pres	Wheatley.
Rochester	Ruscom	Severin Ducharme, Sec	St. Joachim.
Sandwich, S	Union	Denis Perrin, Sec	Tecumseh.
Tilbury, N	Stoney Point	N. D. St. Cyr, Sec	Stoney Point.
	‡Tilbury Centre	John Richardson, Prop	Valetta.
Tilbury, W	Comber	Alfred Halliday, Sec	Comber.
	‡ Ran only a few weeks in 1895.		
KENT:			
Camden	Camden	H. J. French, Sec	Dresden.
Chatham	Chatham Gore	D. McArthur, Pres	Tupperville.
	*Sydenham Valley	Wm. Howe, Sec	Keith.
Harwich	*Rondeau	Calvin Johnson, Prop	Blenheim.
	*Rowe	Ira B. Rowe, Prop	Blenheim.
Howard	*Ridgetown	R. J. Graham, Prop	Belleville.
Orford	Muirkirk	H. T. Richardson, Maker	Muirkirk.
	*Turin	S. Grant, Prop	Turin.
Raleigh	Merlin	Marshall Bros., Props	Merlin.
	*Middle Road	Wm. Seaman, Prop	Charing Cross.
Tilbury, E	Valetta	R. M. Gardiner, Prop	Valetta.
ELGIN:			
Aldborough	*Crinan	Wm. H. McLean, Prop	Crinan.
	Rodney	John F. Taylor, Sec	West Lorne.
	West Lorne		
Bayham	*Firby's	J. L. Brown	Corinth.
	Griffin's Corners	Benj. Brian, Sec	Griffin's Corners.
	Guysboro'	G. W. Marshall, Sec	Guysboro'.
	New England (M.&B.Co.)	O. E. Twiss, Sec	Tilsonburg.
	North Bayham	W. A. Elliott, Sec	Brownsville.
	*Nova Scotia	H. L. McConnell, Sec	Lakeview.
	Vienna	Wm. Watts, Sec Treas	Vienna.
Dorchester, S	Avon	Wm. Morris, Prop	Avon.
	*Lyons	W. E. Martin, Pres	Lyons.
	*Springfield	John Yoder, Sec	Springfield.
Dunwich	Dutton	James E. Graham, Sec	Dutton.
	Wallacetown	A. Keillor, Prop	Wallacetown.
Malahide	Dunboyne	James C. Haggan, Sec	Aylmer.
	Malahide	R. Abell, Sec	Aylmer.
	Northwood	George Beckett, Sec	Aylmer.
Southwold	*Fingal	T. McLaughlin	Fingal.
	*Lyna Station	C. A. Ostrander, Prop	Lyna Sta.
	Payne's Mills	D. Cattanach, Sec	Fruitland.
	West Magdala	R. R. Cranston, Prop	West Magdala.
Yarmouth	Elgin	J. W. Scott, Prop	Sparta.
	Malahide	John Brooke, Prop	Malahide.
	Yarmouth Centre	W. G. Sanders, Sec	St. Thomas.
NORFOLK:			
Charlotteville	Lynedoch	G. R. Gray, Sec	Lynedoch.
	St. Williams	G. W. Newman, Sec. Treas	St. Williams.
	Vittoria	John Pow, Sec	Vittoria.
	Walsh	Walter Rollings, Sec	Walsh.
Houghton	*Clear Creek	Wm. Soper	Clear Creek.
	*Pearson	Isaac Pearson, Prop	Fairground.

CHEESE FACTORIES.—*Continued.*

County and Township.	Name of factory.	Name of secretary or other officer.	Post office address.
NORFOLK—*Continued.*			
Middleton	Courtland (M. & B. Co.)	O. E. Twiss, Sec	Tilsonburg.
	South Middleton	W. N. Fisher, Sec	South Middleton.
Townsend	Boston	H. J. Barber, Prop	Boston.
	*Rockford	W. R. Shearer, Prop	Villa Nova.
	Villa Nova	C. W. Kaufman, Prop	Villa Nova.
	Waterford	S. Cunningham, Sec.-Treas	Waterford.
Walsingham, N	*Carholme	James Knowles, Sec	Carholme.
	Marston	C. H. Brayley, Sec	Marston.
Walsingham, S	Rowan River	S. T. Jackson, Sec	Walsingham Cen.
	South Walsingham	A. J. Herrick, Prop	Erieview.
Windham	*Bookton	James McIlwrath, Prop	Bookton.
	Nixon	Charles Pettit, Sec	Nixon.
	*Vanessa (burned in Sept.)	Finlay Kaufman, Prop	Vanessa.
	†Windham Centre	James Edgeworth, Sec	Windham Centre.
Woodhouse	Black Creek	W. C. Parsons, Prop	Jarvis.
	*Excelsior	W. H. Schuyler, Sec	Simcoe.
	Lynn Valley	E. G. Ford, Prop	Lynn Valley.
HALDIMAND:			
Canborough	Attercliffe Sta	Harold Eagle, Prop	Attercliffe Sta.
	Canboro'	J. N. Paget, Prop	Canboro'.
Cayuga, N	Kohler	J. A. McIntosh, Prop	Kohler.
Cayuga, S	South Cayuga	Harold Eagle, Prop	Attercliffe Sta.
Dunn	Lakeview	Francis Splatt, Prop	Port Maitland.
Oneida	*Hagersville	Harris & Morrow, Props	Hagersville.
Rainham	Selkirk	Edwin Hoover, Sec	Selkirk.
Seneca	Tyneside	J. W. Fotheringham, Prop	Tyneside.
	York	J. N. Paget, Prop	Canboro'.
Walpole	Jarvis, East	Wm. Parkinson, Prop	Jarvis.
	Jarvis, West	W. C. Parsons, Prop	Jarvis.
WELLAND:			
Bertie	Willowdale	(Closed in 1895)	Black Creek.
Crowland	*Welland Ch. Co	Robert Chaffey, Sec	Welland Sta.
Humberstone	Humberstone	Samuel Knisley, Sec	Port Colborne.
Wainfleet	Forks Road	Enos Marr, Sec	Forks Road.
	Wellandport	(Ran a short time)	
LAMBTON:			
Bosanquet	Forest	L. A. Duncan, Sec	Forest.
	Ridge Tree	Alex. Jamieson, Sec	Thedford.
Brooke	Brooke and Warwick	John Mitchell, Sec	Watford.
	Inwood	W. A. Moffatt, Sec	Alvinston.
	*Walnut	W. G. Willoughby, Prop	Walnut.
Dawn	Mawlam's Grove	John H. Powell, Sec	Shetland.
Enniskillen	Oak Ridges	James Kerr, Sec	Oil City.
	Wilsoncroft	(Not operated in 1895)	
Moore	Brigden	John Young, Sec.-Treas	Waubuno.
Plympton	*Gala Bank	J. W. Symington, Manager	Camlachie.
	South Plympton	A. D. Anderson, Sec	Wyoming.
	Uttoxeter	R. G. Bailey, Sec	Uttoxeter.
Sarnia	Vyner	Duncan McDonald, Sec	Mandaumin.
Sombra	Becher	W. A. Grant, Sec	Becher.
	Sombra	Henry Stover, Treas	Sombra.
Warwick	*Maple Grove	J. Henderson, Cheesemaker	Birnam.
	Thompson	F. Patterson, Sec	Arkona.
	*Warwick	J. S. Clarke, Prop	Warwick.
HURON:			
Ashfield	Ashfield	Lottie Johnston, Sec	Belfast.
	Kintail	Charles Stewart, Sec	Kintail.
Colborne	West Huron	Wm. Jones, Sec	Nile.
Goderich	*Holmesville	W. B. Forster, Pres	Holmesville.
Grey	Brussels	Harris & McLauchlin, Props	Brussels.
	Ethel	Robert Barr, Prop	Ethel.
	Molesworth	Henry Coghlin, Sec	Molesworth.
	Walton	R. H. Ferguson, Sec	Walton.
Howick	Fordwich	Michael Daum, Sec	Kurtzville.
	Peoples	(Burned early in 1895)	Wroxeter.
	Springbank	George Padfield, Sec	Gorrie.

CHEESE FACTORIES.—*Continued.*

County and Township.	Name of factory.	Name of secretary or other officer.	Post office address.
HURON—*Continued.*			
Hullett	Constance	J. F. Clark, Sec	Seaforth
	†Summerhill	George W. Hill	Summerhill.
McKillop	Winthrop	John C. Morrison, Sec	Winthrop.
Stanley	Brucefield	Alex. Mustard, Pres	Brucefield.
Stephen	*Centralia	Richard Handford, Pres	Centralia.
	*Corbett	John Corbett, Pres	Corbett.
Tuckersmith	Ridgerville	James Murray, Sec	Hensall.
Turnberry	Bluevale	John Burgess, Sec	Bluevale.
Wawanosh, E	Belgrave	George Hood, Sec	Sunshine.
	Blyth	Charles Stewart, Sec	Blyth.
BRUCE:			
Amabel	Wiarton	George H. Johnson, Sec	Wiarton.
Arran	Allenford	B. Shirreff, Sec	Allenford.
	*Tara	J. D. Tobey, Sec	Tara
Brant	Brant	Daniel Sullivan, Sec	Malcolm.
	Dunkeld	Thomas A. Chisholm, Sec	Dunkeld.
Bruce	Underwood	A. Hilker, Sec	Underwood.
Carrick	Belmore	John Hartley, Sec	Belmore.
Culross	Culross	Chas. Button, Sec	Teeswater.
Eastnor	Barrow Bay	Robert Fair, Prop	Ganonoque.
Elderslie	Elderslie No. 1	J. C. Sparrow, Sec	Williscroft.
	Elderslie No. 2	D. N. McIntyre, Sec	Paisley.
Greenock	Pinkerton	Wm. Murray, Sec	Pinkerton.
	*Riversdale	Joseph Chartrand, Pres	Riversdale.
Huron	Huron	Joseph Doupe, Pres	Kincardine.
	Paramount	J. E. Agnew, Sec	Lucknow.
	Pine River	Wm. Manson, Pres	Pine River.
	Ripley	H. W. Farnell, Pres	Ripley.
Kincardine	Armow	R. B. Campbell, Sec	Armow.
	Bervie	Walter Kellum, Prop	Bervie.
	Clinax	A. Kirkconnell, Pres	Tiverton.
	Glammis	Wm. Atton, Sec	Glammis.
	Millarton	Alex. McNeill, Sec	Kincardine.
Kinloss	Holyrood	James Marshall, Sec	Holyrood.
	*Kinlough	Thomas Malcolm	Kinlough.
	Lucknow	George McDonald, Sec	Lucknow.
Saugeen	Burgoyne	James White, Sec	Burgoyne.
	Star	Isaac E. Haug, Sec	Port Elgin.
GREY:			
Artemesia	Flesherton	James Brodie, Sec	Vandeleur.
	Markdale	Henry D. Irwin, Sec	Markdale.
Collingwood	*Beaver Valley	Samuel Goodfellow, Pres	Duncan.
Egremont	*Boothville	James Marshall	Dromore.
	Yeovil	Wm. Coleridge, Cheesemaker.	Yeovil.
Euphrasia	Rocklyn	Joseph W. Patton, Sec	Rocklyn.
Holland	Chatsworth	James McComb, Sec	Arnott.
Keppel	Pride of the North	W. H. Horne, Sec	North Keppel.
Normanby	Alsfeldt	James H. Ellis, Sec	Alsfeldt.
	Mount Forest	Joseph Tuck, Sec	Mount Forest.
	*Varney	James Blyth, Prop	Varney.
Osprey	Badjeros	E. W. Norman, Sec	Badjeros.
	Feversham	D. W. Clinton, Sec	Maxwell.
	*Singhampton	David Grant, Pres	Singhampton.
Proton	Dundalk	Robert Russell, Sec	Dundalk.
	Ventry	Wm. Fraser, Sec	Ventry.
	Victoria	Thomas Lyons, Sec	Proton Sta.
SIMCOE:			
Esa	*Angus	Neil S. McEachren	Angus.
Fos	*Crossland	James Drysdale, Pres	Crossland.
	Edenvale	John Benson, Sec	Iris.
	*Elmvale	Alex. Murphy, Prop	Elmvale.
Gwillimbury, W	Bond Head	J. P. Wilcox, Prop	Bond Head.
Medonte	Hilladale	W. F. Jamieson, Prop	Hilladale.
Nottawasaga	Avening	W. G. Carruthers, Sec	Avening.
	Glen Huron	David Smith, Sec.-Treas	Smithdale.
	Lavender	S. Flack, Prop	Lavender.
	Silver Creek	J. A. Houldershaw, Sec	Nottawa.
	Stayner	Wm. McIlvride, Prop	Stayner.

CHEESE FACTORIES.—*Continued.*

County and Township.	Name of factory.	Name of secretary or other officer.	Post office address.
SIMCOE—*Continued.*			
Orillia	Northbrook	J. Cuppage, Sec	Orillia.
Oro	*Crown Hill	E. A. Bell, Sec	Crown Hill.
	East Oro	H. J. Tudhope, Sec	Rugby.
	Lakeview	James Ross, Sec	Guthrie.
Tay	North River (closed in '96)	E. W. Kitchen, Sec	Lovering.
	*Vasey	W. J. Jones, Pres	Vasey.
Tecumseth	Beeton	Herbert Law, Sec	Beeton.
	Cookstown	D. Hopper, Sec	Cookstown.
Tiny	Wyebridge	H. W. Copeland, Prop	Wyebridge.
MIDDLESEX:			
Adelaide	*Kerwood	H. P. Richardson, Prop	Kerwood.
	*Keyser	Hugh E. Wilson, Prop	Arkona.
Biddulph	Cedarvale	Michael Blake, Sec	Elginfield.
	North Middlesex	George W. Fox, Sec	Lucan.
Caradoc	Caradoc / Mount Carmel	D. Leitch, Prop	Roome.
	Muncey Road	Chas. F. Price, Sec	Burwell Road.
Delaware	Delaware	H. J. Smith, Sec	Lambeth.
Dorchester, N.	Burnside	S. Barr, Sec	Mossley.
	*Dorchester Sta	Sidney Smith, Sec	Dorchester Sta.
	Gladstone	B. Swales, Sec	Gladstone.
	*Gore	E. P. Hopkins, Prop	Crampton.
	Harrietsville	Robert Facey, Prop	Harrietsville.
	*Thames	J. A. James, Cheesemaker	Nilestown.
Ekfrid	Appin	Hector McFarlane, Sec	Glencoe.
	*Mayfair	M. R. Brown, Salesman	Appin.
Lobo	Cedar Springs	Edwin R. Seabrook, Sec	Komoka.
London	*Birr	Stephen Corsant, Prop	Arva.
	*Bryanston	Benj. Ward, Pres	Bryanston.
	*Devizes	Fred. C. Fitzgerald	Devizes.
	Geary	John Geary, Prop	London.
	North Branch	Fred. Bailey, Sec	Rebecca.
	*Proof Line	James Tier, Sec	Arva.
	Union Hill	W. E. Talbot, Sec.-Treas	Ballymote.
Metcalfe	*Napier	W. S. Calvert	Napier.
	*Sifton	W. S. Sifton, Prop	Strathroy.
Mosa	Glencoe	Hector McFarlane, Sec	Glencoe.
Nissouri, W	Blanshard and Nissouri	Fergus McMaster, Sec	St. Marys.
	Cherry Hill	Hope Webster, Sec	Thamesford.
	West Nissouri	Wm. Lee, Sec	Thorndale.
Westminster	Belmont	W. H. Odell, Treas	Belmont.
	Glanworth	Wm. A. Brodie, Prop	Glanworth.
	North Street	H. B. Stevens, Prop	Lambeth.
	Pond Mills	A. Elliot, Sec	Pond Mills.
	Westminster	A. E. Carrothers, Sec	Hubrey.
	White Oak	J. W. Crinklaw, Prop	White Oak.
Williams, E	†Fernhill	Dugald Campbell, Sec	Fernhill.
Williams, W	West Williams	Wm. Niblock, Sec	Parkhill.
OXFORD:			
Blandford	Bright	R. J. Henderson, Sec	Chesterfield.
	Eastwood	W. E. Hopkins, Sec	Eastwood.
Blenheim	Soho	C. K. Currey, Sec	Drumbo.
Dereham	Brownsville Co. (2 factories)	E. B. Brown, Pres / W. A. Elliott, Sec.-Treas	Brownsvile.
	Culloden	Wm. A. Edgar, Prop	Culloden.
	Dereham and Norwich	Wm. Jones, Sec	Zenda.
	*Dereham and W. Oxford	Wm. Nancekivell	Ingersoll.
	Lawson	J. A. Kneal, Sec	Holbrook.
	Mount Elgin	Lewis A. Price, Pres	Mount Elgin.
	*Prouse	Thomas Prouse, Prop	Mount Elgin.
	Salford	James Mayberry, Sec	Salford.
	Verschoyle	S. R. Gill, Sec	Verschoyle.
Nissouri, E	Kintore	J. W. Sutherland, Sec	Medina.
	*Kintore Branch	Thos. W. Alderson, Prop	Kintore.
	*Lakeside	Robert Marshall, Sec	Lakeside.
	Murray's	Wm. McLaren, Sec	St. Marys.
	Oliver	J. G. McLeod, Sec	Oliver.
	Thamesford	Chas. Jenkins, Prop	Thamesford.

CHEESE FACTORIES.—*Continued.*

County and Township.	Name of factory.	Name of secretary or other officer.	Post office address.
OXFORD.—*Continued.*			
Norwich, N	*Burgessville	C. W. Riley, Prop	Ingersoll.
	*Losee	I. L. Farrington, Manager	Norwich.
	*Dunkin	Gilbert Dunkin, Prop	Norwich.
	Norwich Junction	John McKee, Sec	Norwich.
	*Smith's	Job Smith, Prop	Norwich.
Norwich, S	*Springford	F. C. Anstice, Prop	Springford.
	Summerville	G. H. Treffey, Sec	Hawtrey.
Oxford, E	*Beaconsfield	Haggai Brown, Prop	Beaconsfield.
	Diamond	James McConnell, Sec	Vandecar.
	East and West Oxford	M. S. Schell, Sec	Woodstock.
Oxford, N	Beachville	James Ireland, Prop	Beachville.
	Maple Leaf	Thomas Caddey, Prop	Ingersoll.
	North Oxford	W. H. Sutherland, Sec	Ingersoll.
Oxford, W	*Harris Street	Edward Hunter, Prop	Woodstock.
	*Sweaborg		
	West Oxford	G. H. Cook, Pres	Ingersoll.
Zorra, E	Anderson	Francis Badden, Sec	Woodstock.
	East Zorra and Blandford	A. Miller, Sec-Treas	Walmer.
	German Union	P. J. Altemann, Sec	New Hamburg.
	Honey Grove	Robert Morton, Prop	Cassel.
	Spring Creek	Andrew McKay, Sec	Woodstock.
	Strathallan	Alex. King, Sec	Hickson.
Zorra, W	Bennington	Joshua Pelton, Pres	Bennington.
	Brooksdale	Orlando Reed, Sec	Brooksdale.
	Red Star	James Brown, Prop	Ingersoll.
	*West Zorra	Alex. Smith, Pres	Embro.
BRANT:			
Brantford	*Cainsville	J. R. Alexander, Sec	Brantford.
	North Brant	John German, Sec	St. George.
Burford	Cathcart	T. D. Costin, Prop	Cathcart.
	*Harley	I. L. Farrington	Norwich.
	*Kelvin	A. W. Smith	Northfield Centre
	New Durham	James Paterson, Prop	New Durham.
Dumfries, S	*St. George	John Richardson, Prop	St. George.
	*South Dairy Association	John Nunan, Sec	Paris.
Oakland	Oakland	Wm. Martin, Prop	Oakland.
PERTH:			
Blanshard	Blanshard	George B. Webster, Sec	Science Hill.
Downie	Avonbank	Wm. Tier, Sec	Motherwell.
	Black Creek	Thomas Ballantyne, Prop	Stratford.
	*Gore of Downie	John Dempsey, Prop	Fairview.
	*Hanoverian	H. A. Southwick, Prop	Stratford.
	*St. Paul's		
Easthope, N	Avondale	R. M. Ballantyne, Prop	Stratford.
Easthope, S	Tavistock	A. T. Bell, Sec	Tavistock.
Ellice	Classic	D. A. Dempsey, Prop	Stratford.
	Ellice and Logan	J. J. Brown, Sec	Kinkora.
Elma	Donegal	Thos. G. Ratcliffe, Sec	Donegal.
	Elma	Wm. Lochhead, Sec.-Treas	Atwood.
	Elma and Mornington	W. S. Burnett, Pres	Britton.
	Elmbank	Robert Cleland, Prop	Listowel.
	Maitland	J. R. Hammond, Sec.-Treas	Monkton.
	Monkton	A. Erskine, Sec	Monkton.
	Newry	John Morrison, Prop	Newry.
	Silver Corners	James Morrison, Prop	Henfryn.
	Trowbridge	John Adams, Sec	Trowbridge.
Fullarton	Fullarton	Thomas Stacey, Prop	Fullarton.
	Sebringville	George Hamilton, Sec	Sebringville.
Hibbert	Staffa	J. D. Walker, Prop	Staffa.
Logan	*Willowgrove	Marvin Leake, Sec	Bornholm.
Mornington	Carthage	Hugh Jack, Prop	Newton.
	*Newton		
	*Milverton	G. E. Goodhand, Prop	Milverton.
Wallace	*Cedar Grove	G. V. Poole, Sec	Wallace.
	Wallace	Jeptha Vankleeck, Sec	Listowel.
WELLINGTON:			
Arthur	Conn	John Moore, Pres	Conn.
	Kenilworth	George Cushing, Sec	Kenilworth.

CHEESE FACTORIES—*Continued.*

County and Township.	Name of factory.	Name of secretary or other officer.	Post office address.
WELLINGTON.—*Continued.*			
Eramosa	Rockwood	Hugh Black, Sec	Rockwood.
Erin	*Farmer's	George Hardie Prop	Orton.
Guelph	*Guelph Stilton	Curzon & Graesser, Props	Guelph.
	*Mrs. Parsons	Mrs. Parsons, Prop	Guelph.
	Milne	Wm. Scott, Sec	Guelph.
Luther, W	*Luther and Arthur	John McNab, Sec	Arthur.
Maryborough	Maryborough	Wm. Wilson, Sec	Rothsay.
	Riverbank	L. Nicholson, Sec	Riverbank.
	Wyandotte	Elisha Turner, Pres	Wyandotte.
Minto	Harriston	W. D. McLellan, Sec	Harriston.
	Minto and Arthur	James Wiseman, Sec	Cotswold.
Peel	Goldstone	W. T. Whale, Sec	Goldstone.
	Peel	John Hought, Sec	Glenallan.
WATERLOO:			
Dumfries, N	Galt	Angus McBean, Prop	Galt.
Waterloo	Hickory	Anson Groh, Pres	Preston.
	Oak Grove	Cousins & Dobie, Props	New Hamburg.
Wellesley	Cedar Grove	George Bellinger, Sec	Wellesley.
	Crystal Springs	E. G. Winn, Sec	Hawkesville.
	*Honey Grove	J. W. Chalmers, Prop	Poole.
	*Linwood	Alex. Rannie, Pres	Linwood.
Wilmot	Philipsburg	R. J. Dobie, Cheesemaker	Baden.
Woolwich	Elmira	Isaac Hilborn, Sec	Elmira.
DUFFERIN:			
Amaranth	Laurel	Jonathan Varcoe, Sec.	Laurel.
Luther East	Grand Valley	A. R. Latter, Sec	Grand Valley.
Melancthon	*Conover	Thomas Cornett, Prop	Shelburne.
	Shelburne	Jacob Walker, Sec.-Treas	Shelburne.
Mono	Camilla	Wm. Dynes, Sec	Granger.
	Mono Mills	Wm. Jackson, Prop	Mono Mills.
	Rosemont	S. Ewing, Pres	Rosemont.
LINCOLN:			
Caistor	Caistorville	A. W. Edwards, Prop	Caistorville.
Gainsborough	Bismarck	John L. Heaslip, Sec	Wellandport.
Grimsby, S	South Grimsby	Thomas Theal, Pres	Fulton.
Louth	*Louth	George M. Havens	St. Catharines.
WENTWORTH:			
Ancaster	Alberton	Levi R. Kelly, Sec	Alberton.
	Renforth	D. Hamilton, Sec.-Treas	Renforth.
Beverly	*Beverly	George Patterson, Prop	Christie.
	Lynden	John Boyle, Sec	Lynden.
	Sheffield	P. H. Green, Prop	Sheffield.
Binbrook	*Woodburn	Arthur Edwards, Sec	Woodburn.
Flamborough, W	Freelton	John Fulton, Sec.-Treas	Freelton.
HALTON:			
Trafalgar	*Palermo	Henry Heeks, Manager	Palermo.
	Trafalgar	Slough & McNaughton, Props	Oakville.
PEEL:			
Albion	Mono Road	J. W. Shields, Pres	Mono Road.
Chinguacousy	Conover	J. H. Conover, Sec	Huttonsville.
	Edmonton	Robert McCulloch, Sec	Snelgrove.
	Norval	R. Groat, Prop	Georgetown.
Toronto	Meadowvale	C. W. Switzer, Sec	Meadowvale.
YORK:			
Georgina	Sutton	K. Greenwood, Sec	Sutton West.
Gwillimbury, E	Mount Albert	George A. Myers, Prop	Mount Albert.
	Newmarket	W. J. Willson, Sec	Newmarket.
King	Eversley	Henry Rogers, Sec	Eversley.
	Kettleby	F. C. Walton, Sec	Kettleby.
Markham	Ringwood	J. A. Mitchell, Sec	Ringwood.
Whitchurch	Aurora	A. Love, Sec.-Treas	Aurora.
	Gormley	Bruce Bros., Props	Gormley.
ONTARIO:			
Brock	Derryville	Wm. Harrison, Sec.-Treas	Cannington.
Mara	Gamebridge	W. M. Stewart, Sec	Gamebridge.
	Uptergrove	George Read, Sec	Uptergrove.

CHEESE FACTORIES.—*Continued.*

County and Township.	Name of factory.	Name of secretary or other officer.	Post office address.
ONTARIO.—*Continued.*			
Reach	*Manchester	Richard S. Parks	Manchester.
	*Tabor Bros	...	Port Perry.
Whitby	Brooklin	D. Halliday, Sec	Brooklin.
Whitby, E	Geneva	Wm. H. Scott, Sec	Oshawa.
DURHAM:			
Cartwright	Blackstock	James Parr, Pres	Blackstock.
Cavan	Fraserville	Joseph Madill, Sec	Fraserville.
	*Ida	Hugh Gillespie, Prop	Ida.
	*Mt. Pleasant	Jamieson Bros, Props	Mount Pleasant.
	*Millbrook	James Brock, Pres	Millbrook.
Clarke	†Kendal	Wm. Underwood, Sec	Kendal.
	*Newtonville	W. J. Jones, Sec	Clarke.
	Orono	J. G. Honey, Prop	Orono.
Darlington	Darlington	D. Montgomery, Pres	Solina.
	Hampton	F. L. Ellis, Sec	Hampton.
Hope	Hope	J. G. Honey, Prop	Orono.
	Perrytown		
Manvers	Fleetwood	J. A. Wood, Prop	Fleetwood.
	Janetville	Thos. C. Birchard, Sec	Janetville.
NORTHUMBERLAND:			
Alnwick	Roseneath (Bensley)	Dennis Keogan, Sec.-Treas.	Hastings.
Brighton	*Brighton and Murray	J. Terrill, Pres	Wooler.
	*Cedar Hill	Hugh Strong, Prop	Hilton.
	*Codrington	A. D. Richards, Pres	Codrington.
	Hilton	A. E. Thorne, Sec	Hilton.
	*Newcombe's Mills	Mr. Hutcheson, Prop	Newcombe's Mills
	Standard (Bensley)	James O'Connell, Sec	Warkworth.
Cramahe	Castleton	J. L. Mullett, Prop	Castleton.
	Cramahe	R. A. Brintnell, Treas	Edville.
	*Morganston	A. L. Darling, Prop	Morganston.
	Salem	S. E. Dixon, Sec	Colborne.
Haldimand	Grafton	Thos. Hoskin, Prop	Grafton.
	*Spring Valley	Christopher Roberts, Prop	Fenella.
	Wicklow	B. J. Gaffield, Prop	Wicklow.
Hamilton	Baltimore	F. S. Gillespie, Prop	Baltimore.
	Coldspring	H. R. Free, Prop	Coldsprings.
	Crown	T. W. Philp, Prop	Precious Corners.
Monaghan, S	Bensfort	John Riddell, Sec.-Treas	Bensfort.
Murray	Gwynne	R. G. Way, Prop	Trenton.
	*Queens	J. A. Huffman	Trenton.
	Rogers	W. H. Phillips, Sec.-Treas	Frankford.
	Wooler	T. R. Garratt, Sec	Wooler.
Percy	†Beaver	Wm. Bensley, Prop	Warkworth.
	*Brickley		
	†Norham		
	*Medel	Courtland Aggett, Prop	Godolphin.
	Warkworth	J. Humphries, Sec	Warkworth.
Seymour	Brae	Gilbert Bedford, Sec	Campbellford.
	Crow Bay	James C. Clough, Pres	Sargisson.
	Empire	R. P. Grills, Sec	Campbellford.
	*Forest	James Strachan, Pres	Meyne.
	I. X. L.	John McGrath, Sec	Campbellford.
	Meyersburg	Nelson Simmons, Sec	Meyersburg.
	Prince of Wales	James Shillinglaw, Prop	Burnbrae.
	*Rylestone	John Arnold, Sec	Campbellford.
	*Seymour, West	John Rutherford, Pres	Campbellford.
	Stanwood	James S. Peoples, Sec	Preneveau.
	*Valley	Patrick Kelleher, Pres	Campbellford.
	Woodland	F. Macoun	Campbellford.
PRINCE EDWARD:			
Ameliasburg	*Bayside	R. J. Graham, Prop	Belleville.
	*Mountain View	A. J. Potter, Sec	Rossmore.
	Quinte	Alex. H. Henderson, Sec	Rossmore.
	Sprague	John Sprague, Prop	Ameliasburg.
	*Weller's Bay	James A. Johnson, Sec	Consecon.
Athol	Cherry Valley	Luther Platt, Sec	Cherry Valley.

CHEESE FACTORIES—*Continued.*

County and Township.	Name of factory.	Name of secretary or other officer.	Post office address.
PRINCE EDWARD—*Con.*			
Hallowell	Allisonville	George Eckert, Sec.-Treas	Allisonville.
	Bloomfield	David S. Hubbs, Sec.-Treas.	Bloomfield.
	Unionvale	H. J. Vincent, Sec.-Treas	Picton.
Hillier	Cloverdale	L. G. Dorland, Sec	Wellington.
Marysburgh, N	*Cressey	John Prinyer, Pres	Prinyer.
	Union	John Mitchell, Prop	Picton.
Marysburgh, S	*Black Creek	Mrs. J. M. Huyck, Prop	Bl'k River Bridge
	Point Traverse	Alva Rose, Sec	South Bay.
	*Royal Street	W. T. B. Striker, Prop	Milford.
Sophiasburg	Ben Gill (Benson)	A. E. Calnan, Sec.-Treas	Allisonville.
	Bethel	W. A. Crawford, Sec	Bethel.
	*Big Island	Ryerson Rankin	Demorestville.
	*Gilbert's Mills	Richard Benson, Prop	Picton.
	*Grapevale	James Roblin, Prop	Fish Lake.
	Maple Leaf	Alfred Foster, Prop	Fish Lake.
	Northport	R. A. Brooks, Sec	Northport.
LENNOX AND ADDINGTON:			
Adolphustown	Platt	Thomas F. Gibbs, Sec	Adolphustown.
Amhurst Island	Amherst Island	Wm. H. Moutray, Sec	Stella.
Camden	Camden, East	E. J. Madden, Prop	Newburgh.
	*Centreville	Wm. Whelan, Prop	Centreville.
	*Croydon	C. E. Bartlett, Prop	Napanee.
	Enterprise	Thomas Clancey, Prop	Enterprise.
	*Whitman Creek	A. B. Carscallen, Sec	Enterprise.
	Moscow	Vanluven Bros, Props	Moscow.
	Newburgh (Madden)	G. A. Aylesworth, Sec	Newburgh.
Denbigh and Abinger	Denbigh	Dawson & Wood, Props	Plevna.
	Vennachar		
Ernestown	Bath	Phippen & Bro., Props	Sandhurst.
	Empey	W. F. Gerow, Prop	Napanee.
	Farmer's Friend	L. L. Gallagher, Prop	Wilton.
	Odessa	J. C. Fraser, Sec	Odessa.
	Union	C. E. Bartlett, Prop	Napanee.
	*Violet	G. T. Perry, Prop	Morven.
	Wilton	Robert Metzler, Prop	Odessa.
Fredericksburg, N	*Excelsior	C. E. Bartlett, Prop	Napanee.
	*Napanee		
	Palace Road	W. F. Gerow, Prop	Napanee.
Fredericksburg, S	Conway	E. H. Phippen, Prop	Sandhurst.
	Sillsville	James Rennie, Treas	Sillsville.
Kaladar	*Boundary	James Brydon	Flinton.
	Flinton	O. M. Rolufs, Prop	Flinton.
Richmond	Forest Mills	Alex. Hewitt, Sec.-Treas	Kingsford.
	Selby	Ira B. Hudgins, Sec	Selby.
Sheffield	Clareview	John Garrett, Sec	Erinsville.
	*Sheffield	James Byrne, Prop	Tamworth.
	Tamworth	James J. Barry, Prop	Tamworth.
FRONTENAC:			
Barrie	Cloyne	Wm. A. Humphries, Sec	Cloyne.
Bedford	Bedford Mill	J. H. Singleton, Prop	Newboro'.
	*Fermoy	D. P. Alguire, Prop	Westport.
	*Salem		
	*Iron Junction	R. A. Popplewell, Prop	Godfrey.
	*Tichborne	George Lake, Sec	Tichborne.
Clarendon	Ardoch	Alex. Munro, Sec	Ardoch.
	Plevna	Dawson & Wood, Props	Plevna.
Hinchinbrooke	Parham	George A. Smith, Prop	Parham.
	Wagarville	W. A. Wagar, Sec	Parham.
Howe Island	*Thousand Islands	John Prior, Sec	D'Arcy.
Kennebec	Arden	W. A. Ford, Prop	Arden.
	†Harlowe	Robert Scott, Sec	Harlowe.
Kingston	*Arigan	Hogan & Son, Props	Mount Chesney.
	Cataraqui	W. J. Gibson, Sec	Collins' Bay.
	*Glenburnie	Joseph Fowler	Mount Chesney.
	Glenvale	Joseph Cramer, Prop	Glenvale.
	*Redden's	John Redden, Prop	Portsmouth.
	Union	James Dougherty, Prop	Elginburg.

CHEESE FACTORIES.—*Continued.*

County and Township.	Name of factory.	Name of secretary or other officer.	Post office address
FRONTENAC—*Continued.*			
Loughborough	*Desert Lake	Alfred Page	Desert Lake.
	*Forest	John Moreland, Prop	Sydenham.
	*Live and Let Live	F. D. McAuley, Prop	Railton.
	Perth Road	Wm. Guthrie, Prop	Perth Road.
Olden	*Long Lake	Ira Smith, Prop	Long Lake.
	Mountain Grove	Samuel Abbott, Prop	Mountain Grove.
Oso	Crow Lake	George Bradshaw, Sec	Crow Lake.
	Oso	Thomson & Avery, Props	Sharbot Lake.
	Sharbot Lake	C. A. Morris, Sec	Sharbot Lake.
	Zealand	W. A. Moore, Sec	Perth.
Palmerston	*Donaldson	Samuel Donaldson, Sec	Donaldson's Mills
	Ompah	Dawson & Wood, Props	Plevna.
Pittsburg	*Central	J. Anglin	Washburn.
	*Granite Hill	F. J. Henderson, Prop	Pittsferry.
	Keenan & Son	J. J. Keenan, Sec	Kingston.
	Leo Lake	John Dockrill, Prop	Brewer's Mills.
	Maple Leaf	E. J. Agnew, Prop	Joyceville.
	Morning Star	D. McLean, Sec	Eric.
	*Pine Grove	John Dillon, Prop	Brewer's Mills.
	Pine Hill	David Trotter, Sec.-Treas	Cushendall.
	Rose Hill	W. Fitzgerald, Sec	Dufferin.
	*Woodburn	John Bennett	Willetsholme.
Portland	Bell Rock	Vanluven Bros., Props	Moscow.
	*Harrowsmith	Bradshaw & Metzler, Props	Harrowsmith.
	*Hartington	W. H. Reynolds, Prop	Verona.
	*Verona		
Storrington	*Battersea	H. J. McDonald	Sunbury.
	Bear Creek	James Greenlee, Prop	Sunbury.
	Coldsprings	C. W. Langwith, Prop	Sunbury.
	*Duff's	Wm. Duff, Prop	Inverary.
	*Keslerville	George Clarke, jr., Sec	Battersea.
	Model	Alexander Ritchie, Sec	Inverary.
	*Opinicon	Adam Barr, Prop	Inverary.
	*Sandhill	George Sands, Prop	Sunbury.
	*Sunbury	John McDonald	Sunbury
Wolfe Island	*Gilt Edge	Wm. Henderson	Wolfe Island.
	Ontario	R. J. Speer, Prop	Wolfe Island.
	St. Lawrence	Joseph Kenny, Prop	Kingston.
	*Wolfe Island	John Horne	Wolfe Island.
LEEDS:			
Bastard and Burgess	*Burgess	Thomas Myers, Prop	Portland.
	*Forfar		
	*Myers		
	*Chantry	Smith & Knapp, Props	Chantry.
	*Philipsville		
	*Plum Hollow		
	Island City No. 1	Strong & Davison, Props	Delta.
	*Harlem	Henry Smith, Prop	Harlem.
	*Newboyne	Alex. Rogers	Newboyne.
	Portland	E. H. Tallman, Prop	Easton's Corner
Crosby N	*Ardmore	Alguire & Adams, Props	Westport.
	*Mountain		
	*Westport		
	*Centreville	J. H. Singleton, Prop	Newboro'.
	*Model		
Crosby S	*Clear Lake Union	George Kerr	Singleton.
	*Dominion	E. V. Halladay	Elgin.
	*Elgin Model	J. R. Dargavel and R. G. Murphy, Props	Elgin.
	*Rockdale		
	*Maple Grove	S. M. Halladay	Elgin.
	*Morton	R. H. Sommerville	Morton.
	Ontario	J. H. Singleton, Prop	Newboro'.
Elizabethtown	*Anvern	Raphael & Walker, Props	Fairfield East.
	Glen Buell	C. J. Gilroy, Prop	Glen Buell.
	Maple Grange	Joshua Gilroy, Sec Treas	Lyn.
	*North Star	Strong & Stewart, Props	Lyn.

CHEESE FACTORIES.—*Continued.*

County and Township.	Name of factory.	Name of secretary or other officer.	Post office address.
LEEDS.—*Continued.*			
Elizabethtown	*Orchard Valley	(Burned down in October)	Jellyby.
	*Palace	Strong & Kelly, Props	Addison.
	Rockspring	D. M. Wilson, Prop	Rockspring.
	Royal Dominion	T. W. Horton, Prop	New Dublin.
	*Riverview	J. R McNish	Maitland.
	*Stanley	Dickey & Stafford, Props	Lyn.
	*Star	J. B. Judson	Brockville.
Elmsley S	*Hunter's	Alex. Cameron, Prop	Smith's Falls.
	*Lombardy	Michael O'Meara, Sec	Lombardy.
Kitley	*Farmers' Choice	Henderson Bros., Props	Athens.
	*Farmers' Friend	Smith & Knapp, Props	Chantry.
	*Glen Elm	Abraham Coad, Prop	Brockville.
	*Robinson's Mills		
	Newbliss	John Mackay, Sec	Jasper.
	Standard No. 1	Bellamy & Stinson, Props	Toledo.
	*Willow No. 2	Robert T. Beckett, Prop	Kemptville.
Leeds and Lansdowne F.	Bruce	James Keating, Prop	Lansdowne.
	Fairfax		
	Rapids Valley		
	Selton		
	Coldbrook	J. C. Stafford, Prop	Lansdowne.
	Lorne	James Donevan, Sec	Gananoque.
	*Gananoque	J. B. Wilson, Salesman	Wilstead.
	*Marble Rock		
	*Gananoque Junction	John Connor, Prop	Gananoque.
	McCalpin's No. 1	Henry McCalpin, Prop	South Lake.
	*McCalpin's No. 2	Frank Dawson, Sec	South Lake.
	Oak Leaf	M. K. Everetts & Son, Props.	Easton's Corners.
	*Sand Bay	B. Herbison, Sec	Sand Bay.
	Tilley	J. W. Grier, Sec	Tilley.
	Warburton	C. W. Sliter, Sec	Warburton.
	*Woodvale	George Bradley, Sec	Outlet.
Leeds and Lansdowne R.	Cold Glen	J. Willoughby, Prop	Ellisville.
	Gilt Edge	Ed. Coleman, Sec	Seeley's Bay.
	Island City No. 2	Strong & Davison, Props	Delta.
	*Lakeview	W. H. Pierce, Treas.	Ellisville.
	Lyndhurst	A. Halladay, Prop	Lyndhurst.
	Seeley's Bay	R. Gardiner, Prop	Seeley's Bay.
	Springvale	Norton Shook, Prop	Sweet's Corners.
Yonge and Escott	Aberdeen	J. A. Ferguson, Prop	Caintown.
	Caintown Union	W. J. White, Sec	Caintown.
	Elbe	Bates & Brown, Props	Elbe Mills.
	*Escott Union	Ziba Austin, Pres	Rockfield.
	Farmersville	Lester Brown, Prop	Athens.
	*Holland Union	John Fenton, Pres	Escott.
	*Junetown "A"	J. Herbison, Pres	Junetown.
	Junetown "B"	Alvin Avery, Sec	Junetown.
	*Lake Eloida	Henderson Bros., Props	Athens.
	Leeds County	Purvis & Ferguson, Props	Yonge Mills.
	*Lillie's Union	John Percival	Lyn.
	*Mallorytown	A. W. Mallory, Prop	Mallorytown.
	*Mallorytown Union	Oscar Forrester, Pres	Mallorytown.
	*Ronan's	A. McDougal, Prop	Addison.
	Springfield Union	Norman Hutchison, Sec	Escott.
	Thousand Island	G. E. Godkin, Sec	Escott.
GRENVILLE:			
Augusta	Algonquin	Earl & Edwards, Props	Algonquin.
	Glenmore		
	Augusta Model		
	Charleville	Rufus Earl, Prop	Algonquin.
	Domville	J. W. Place, Sec	Prescott.
	Grenville	John Fretwell, Prop	Prescott.
	Maitland Union	John Wilson, Sec	Maitland.
	North Augusta	J. C. Chapman, Sec	North Augusta.
	Roebuck	J. W. Newman, Prop	Roebuck.

CHEESE FACTORIES.—*Continued.*

County and Township.	Name of factory.	Name of secretary or other officer.	Post office address.
GRENVILLE.—*Continued.*			
Augusta	South Branch	Thos. E. Meech, Prop	North Augusta.
	*St. Lawrence	John McLean, Sec	Maitland.
	Willow	Andrew McNish, Sec	Brockville.
Edwardsburg	Clover Hill	Wm. F. Burchil, Sec	Cardinal.
	Glensmail (Eager's No. 12)	R. J. Bennett, Sec	Glensmail.
	Johnstown (Eager's No. 19)	Lawrence Rooney, Sec	Prescott.
	*Lime Kiln	S. H. Webb, Prop	Cardinal.
	Mainsville (Eager's No. 7)	Wm. Eager, Prop	Morrisburg.
	*Millar's No. 1	George Fairbairn, Sec	Spencerville.
	Millar's No. 2	R. E. Millar, Sec	Millar's Corners.
	Millar's No. 3	Arch. Fraser, Sec	Spencerville.
	*Park St No. 1	Wm. Hunter	Spencerville.
	*Perry Creek	Orange Dawson, Prop	Prescott.
	St. Lawrence	Wm. Reddie, Sec	Cardinal.
	*Shanley	Wm. Wallace	Shanley.
	Union	Grant & Hyndman, Props	Hyndman.
Gower, S.	Ault's No. 2	John W. Ault, Prop	Shanley.
	Heckston (No. 1)	Wm. Eager, Prop	Morrisburg.
	*Wilson's Bay	George Eager, Prop	Kemptville.
Oxford	*Bishop's Mills	Alexander Bros., Props	Bishop's Mills.
	*Burritt's Rapids	A. C. White, Sec	Burritt's Rapids.
	*Farmers' Union	Geo. S. Johnston, Sec	Oxford Mills.
	*Graham	E. H. Graham, Prop	Millar's Corners.
	*Kemptville	O. Bush, M.P.P., Prop	Kemptville.
	*Newmanville (P. of I.)	H. Newans, Sec	Newmanville.
	*Oxford Mills	Levi Paton, Prop	Oxford Mills.
	*Patterson's Corners		
	Scott's (P. of I.)	Wm. Scott, Sec	Kemptville.
Wolford	*Farmer's Own	Daniel Moir, Sec	Merrickville.
	Old Fairfield	M. K. Everetts & Son, Prop	Easton's Corners.
	Rideau Valley		
	*Union	George Baker, Sec	Merrickville.
DUNDAS:			
Matilda	Advance No. 2	Thomas Scott, Prop	Brinston's Corners
	Advance No. 3	Mrs. Thos. McIntyre, Prop	Dixon's Corners.
	Brinston's Corners	Payne & Ennis, Prop	Brinston's Corners
	Dundela (No. 6)	Wm. Eager, Prop	Morrisburg.
	Rowena (No. 10)		
	Winchester Springs (No. 22)		
	East Matilda	George Smyth, Sec	Rowena.
	Farmers'	George Reichardt, Sec	Iroquois.
	*Gilmour	Gavin Gilmour, Prop	Pleasant Valley.
	Iroquois (Eager's No. 28)	T. W. Hare, Sec	Iroquois.
	*Model No. 1	E. A. Roode, Prop	Hulbert.
	Morrisburg	C. E. Robertson, Sec	Morrisburg.
	*Maple Grove	Thos. McDonald, Prop	Morrisburg.
	*South Matilda	Paul Coons, Sec	Iroquois.
	*West Matilda	James Miller	Haddo.
Mountain	*Graham	James H. Graham, Prop	South Mountain.
	Hallville (P. of I.)	Abraham Hay, Sec	Hallville.
	Inkermann (No. 18)	Wm. Eager, Prop	Morrisburg.
	South Mountain (No. 3)		
	*Mulloy & Co.	Robinson & Mulloy, Props	Winchester.
	*Ross & Co. No. 1	John McTavish, Sec	Vancamp.
	*Scott's	Edward Scott, Prop	Heckston.
Williamsburg	*Bouck's Hill (P. of I.)	H. W. Ford, Sec	Bouck's Hill.
	Bowman (No. 13)	Edward Zufelt, Prop	Glen Becker.
	Caughnawaga (No. 5)	Wm. Eager, Prop	Morrisburg.
	Riverside (No. 15)		
	Colquhoun (Berwick No. 6)	James Small, Prop	Berwick.
	*Dunbar	Daniel McMillan, Sec	Dunbar.
	*Hoasic	Chas. Weagant, Sec	Hoasic.
	Glen Becker (P. of I.)	Ira W. Beckstead, Sec	Glen Becker.
	*Elma	John N. Logan, Prop	Elma.

CHEESE FACTORIES.—*Continued*

County and Township.	Name of factory.	Name of secretary or other officer.	Post office address.
DUNDAS.—*Continued.*			
Williamsburg	North Williamsburg	James Dickey, Sec	N. Williamsburg.
Winchester	Ault's No. 1	John W. Ault, Prop	Shanley.
	Chesterville	Wm. Eager, Prop	Morrisburg.
	Morewood		
	Ormond		
	Craig & Son, No. 4	Wm. Craig & Son, Props	Russell.
	Kendrick & Carlyle	W. R. Allison, Sec-Treas	Dunbar.
	Maple Ridge	R. D. Fulton, Sec	Chesterville.
	*Morewood Union	Frank Elliott, Sec	Morewood.
	*Mulloy & Co. (2 factories)	Robinson & Mulloy, Props	Winchester.
	*Rose & Co., No. 2	John McTavish, Sec	Vancamp.
	*Summer's	D. E. Summers, Sec	Winchester.
	White Globe No. 1	Alpin Campbell, Prop	Ormond.
	*	Preston McIntosh, Prop	Winchester Sp'ngs
	*	J. C. Simser, Prop	Chesterville.
STORMONT:			
Cornwall	Black River Nos. 1 and 2	P. N. Tait, Prop	Mille Roches.
	Mille Roches		
	*Cornwall Centre	Thomas Tobin, Prop	Cornwall Centre.
	*Grant's Corners	D. M. Macpherson, Prop	Lancaster.
	*South Branch		
	*McMillan's Bridge	P. H. McDiarmid	Martintown.
	*Moulinette	J. G. Snetsinger, Sec	Moulinette.
	*St. Andrew's	Samuel Lawson, Sec	St. Andrews.
Finch	*Ashburn	Hugh McMillan, Sec	Berwick.
	*Berwick Cheese Co	J. C. Duame, Pres	Crysler.
	Cahore (No. 25)	Wm. Eager, Prop	Morrisburg.
	Limerick (No. 30)		
	Cannamore (No. 14)	Edgar & Compbell, Props	Cannamore.
	Cedar Grove	D. D. Cameron, Sec	South Finch.
	Crysler	John Currie, Sec	Crysler.
	Finch	Benjamin Adams, Sec	South Finch.
	*Goldfield	J. M. Hoover, Prop	Goldfield.
	Grantley (Berwick No. 1)	James Small, Prop	Berwick.
	Lorraine No. 13	Chas. Chambers, Prop	Chesterville.
	*Riverside	George McLean, Prop	South Finch.
Osnabruck	Colquhoun (No. 2)	James Small, Prop	Berwick.
	Dickenson's Landing	C. S. Baker, Pres	Wales.
	Farran's Point	J. R. Farran, Sec	Farran's Point.
	Lunenburg	H. McEwen, Sec	Lunenburg.
	Newington	Wm. Wood, Prop	Newington.
	North Osnabruck	Gordon Baker, Treas	Osnabruck Cen.
	Ontario	James A. Zeran, Sec	Dixon.
	Pleasant Valley	G. H. Jackson, Sec	Aultsville.
Roxborough	Avonmore (No. 63)	D. M. McPherson, Prop	Lancaster.
	Duff's (No. 18)		
	1st Roxborough (No. 15)		
	4th Roxborough (No. 14)		
	*Black River No. 3	P. N. Tait, Prop	Mille Roches.
	Farmer's Joy	Alex. L McLean, Sec	Gravel Hill.
	*Lodi	John L. Montgomery	Lodi.
	*Moose Creek No. 1	Alex. McRae, Sec	Moose Creek.
	Moose Creek No. 2	John Fraser, Sec	Moose Creek.
	*Russell No. 6	Wm. Munroe & Son, Props	Navan.
	Sandringham	Alex. Fraser, Prop	Sandringham.
GLENGARRY:			
Charlottenburg	Apple Hill (No. 8)	D. M. Macpherson, Prop	Lancaster.
	Christie (No. 67)		
	Craig (No. 25)		
	Ferguson (No. 22)		
	Fraserfield (No. 64)		
	Glen (No. 23)		
	Glen Gordon (No. 7)		
	Green Valley (No. 21)		
	Martintown (No. 20)		
	North Branch (No. 19)		
	Summerstown (No. 26)		

CHEESE FACTORIES.—*Continued.*

County and Township.	Name of factory.	Name of secretary or other officer.	Post office address.
GLENGARRY.—*Continued.*			
Charlottenburg	Camerontown	Horatio Collier, Sec	Summerstown Sta
	*Martintown	Wm. Irvine, Prop	Martintown.
	*St. Raphael's		
	Munroe's Mills	W. J. Denton, Sec	Munroe's Mills.
	*South Branch	D. A. Loney, Prop	Tyotown.
	*Tyotown		
Kenyon	Dominionville (No. 13)	D. M. Macpherson, Prop	Lancaster.
	Maxville (No. 12)		
	St. Elmo (No. 10)		
	Town Hall (No. 16)		
	3rd Kenyon (No. 17)		
	*Aberdeen No. 1	Gordon Fergusson	St Elmo.
	*Brookdale	J. W. Kennedy	Apple Hill.
	*Greenfield	J. J. Cameron	Greenfield.
	*McKenzie No. 1	A A. McKenzie	Dunvegan.
	Maple Creek No. 1	Wm. McRae, Prop	Dunvegan.
	*Spring Creek (4 factories)	W. D. McLeod, Prop	Kirkhill.
	*Star No. 1	W. J. Denton	Alexandria.
	*Thistle	J. A. Welsh	Dunvegan.
Lancaster	Bridge End (No. 4)	D. M. Macpherson, Prop	Lancaster.
	Glen Norman (No. 5)		
	Home (No. 1)		
	3rd Concession (No. 2)		
	5th Concession (No. 3)		
	Bainsville	Sangster & McCuaig, Props.	Bainsville.
	Pine Grove		
Lochiel	*Balmoral	Arch. McDonald	McCormick.
	Breadalbane (Spring Creek)	J. C. McLaurin, Sec	Dalkeith.
	Cameron (No. 6)	D. M. McPherson, Prop	Lancaster.
	*Boyd's	Spring Creek Combination; W. D. McLeod, Prop	Kirkhill.
	*Fassifern		
	*Glen Sandfield		
	*Kirkhill		
	*McCrimmon		
	*Mac's Corners		
	*Dalkeith	Wm. Irvine, Prop	Dalkeith.
	E. H. No. 2	Leroy & Ogden, Props	Vankleek Hill.
	*Lorne	V. G. Chisholm, Sec	Lochiel.
	*Union	D. J. McDonald, Sec.	Alexandria.
PRESCOTT:			
Alfred	Alfred (Lot 11, Con. 5)	Doucè Daoust, Prop	Alfred.
	Bolt (Lot 8, Con. 4)	J. R Brownrigg, Sec	Alfred.
	Hughes (Lot 36, con. 3)	Eli Robinson, Sec	Treadwell.
	*(Lot 16, Con. 4)	Joseph Charette, Prop	Alfred.
	*(Lot 20, Con. 2)	Onesime Dubois, Prop	Lefaivre.
	*(Lot 23, Con. 2)		
	*(Lot 20, Con. 1)		
	*(Gore, Con. 3)		
	*(Lot 10, Con. 1)	Joseph Meloche, Prop	Lefaivre.
	*(Lot 28, Con. 1)		
	*(Lot 29, Con. 2)	Alphonse Presenault, Prop	Lefaivre.
	*(Lot 4, Con. 9)	Louis Tourangeau, Prop	Alfred.
	*(Lot 1, Con. 6)	A. Leroux, Prop	St. Eugene
Caledonia	*St. Amour	H. Gareau	St. Amour.
	*Sandown	James H. Molloy	Sandown
	*Star No. 1	P. Cadieux, Prop	Rentlier.
	*Star No. 2	Calixte Castelletti	Rentlier.
Hawkesbury, E	*Albert Lee	Chauncey Wyman	Clute a Blondeau
	*Ashgrove Cheese Co	James Hurley, Sec	Barb.
	Amede Bee Nos. 1 and 2	Amede Leroux, Prop	St. Eugene.
	Climax No. 1	Simon Labrosse, Prop	St. Eugene.
	Maple Leaf No. 6		
	Elm Grove	John McNish, Prop	Vankleek Hill.
	E. Hawkesbury No. 1	Leroy & Ogden, Props	Vankleek Hill.
	*Beaver	Edmond Cardinal, Prop	Mangenais, Que.

CHEESE FACTORIES.—*Continued.*

County and Township.	Name of factory.	Name of secretary or other officer.	Post office address.
PRESCOTT.—*Continued.*			
Hawkesbury, E	*Bright Star No. 2	Moise Lafrance, Prop	St. Eugene.
	*Golden Hill	Daniel Hurley, Prop	Vankleek Hill.
	*Maple Leaf No. 1	John McAlpin, Prop	St Ann, Prescott.
	*Maple Leaf No. 2	Emanuel Chevier, Prop	Point Fortune.
	Monolea	Thomas Ross & Sons	Hawkesbury.
	Roseberry	Antoine Paiement, Sec	St. Ann, Prescott
	*Spring Creek No. 1	McCuaig & Cheney, Props	Vankleek Hill.
	*Stardale	Samuel Stephens	Vankleek Hill.
Hawkesbury, W	*Aberdeen	Wm Northcott, Sec	Vankleek Hill.
	*Hawkesbury	W. H. Byers, Prop	Hawkesbury.
	*Dairy Field	Neil Fraser	Vankleek Hill.
	*Spring Creek No 4		
	*Ottawa Valley (No. 6)	Wm. McAlpin, Prop	Vankleek Hill.
	*Sandy Hill	Solomon Bertrand	Hawkesbury.
	Spring Grove No. 1	S. N. Morrison, Prop	Henry.
	*Star	A. F. Arnold, Prop	Vankleek Hill.
	*Vankleek Hill	McCuaig & Cheney, Props	Vankleek Hill.
Longueuil	*East Hawkesbury No. 4	Leroy & Ogden, Props	Vankleek Hill.
	*L'Orignal	R. H. Marston, Sec	Cassburn.
	*	Louis Tourangeau	Caledonia Springs
	*	J. O Ronson	Caledonia Springs
Plantagenet, N	B	Denis Robinson, Treas	Plantagenet.
	*Brown's Wharf	Aime Sauve, Prop	Treadwell.
	*Curran	Dosithe Cadieux, Prop	Lalonde.
	*Dubois	Louis Charbonneau, Prop	Plantagenet.
	F 32	Eli Raymond, Sec	Wendover.
	*Gratton	Maxime Gratton, Prop	Wendover.
	†Plantagenet	Joseph Charbonneau, Prop	Plantagenet.
	*Senecal	Gideon Senecal, Prop	Treadwell.
	Springbrook	Henry Moffatt, Prop	Pendleton.
	Star	John McCrank, Sec	Curran.
	Therrien	Charles Therrien, Prop	Curran.
	Treadwell	A. H. Chessar, Sec	Plantagenet.
	Wendover, C	Senecal & Chenier, Props	Plantagenet.
Plantagenet, S	B B 3	Dosithe Cadieux, Prop	Lalonde.
	Fournier	John M. Ryan, Sec	Fournier.
	*Maple Leaf Nos 1 and 2	— Cote, Sec	St. Isidore.
	†Nation River (new)	John Ryan	Fournier
	Nation River Ferry	Farrell & Charlebois, Props	Pendleton.
	Pendleton	Henry Moffatt, Prop	Pendleton.
	*Riceville	Scott Bros., Props	Riceville.
	*Russell No. 8	Wm. Munroe & Son, Props	Navan.
	*St. Isidore	Francis Villeneuve, Prop	St. Isidore.
RUSSELL:			
Cambridge	Craig & Son Nos 3 and 5.	Wm. Craig & Son, Props	Russell.
	Mayerville	Leonard Sanche, Sec.-Treas	Mayerville.
	*St. Albert	Louis Genier, Pres	St. Albert.
	South Casselman	Damase Racine, Prop	South Casselman.
	*South Indian	J K. Meredith, Prop	South Indian.
Clarence	The Brook	Chenier & Gendron, Props	The Brook.
	*Base Line	Ferdinand Houle	Clarence Creek.
	*Canaan (Russell No 4)	Wm. Munroe & Son, Props	Navan.
	*Grant (Russell No. 7)		
	*Canaan	Alex. Ethier, Prop	Canaan.
	*Clarence Creek	Magloire Landry, Prop	Clarence Creek.
	*Clarence	W. J. Tucker & Co., Props	Clarence.
	*The Lake	Simon Ouellette, Prop	The Lake.
	*	Alderic Lalonde, Prop	The Brook.
	*Lavigne	Amede Lavigne, Prop	The Lake.
	Ottawa Valley No. 1	G. W. Fortier, Prop	Clarence Creek.
	*Wendover	Emery Lalonde, Prop	The Lake.
Cumberland	Blue Bells	John Shirreffs, Prop	Rockland.
	*Danis	Samuel Danis, Sec	Daniston.
	*Pearbrook		
	*Vars		
	*Sarsfield	Wm. Munroe & Son, Prop	Navan.
	*Navan		
	*McLean's Corners		
	*Montreal Road		

CHEESE FACTORIES.—*Continued.*

County and Township.	Name of factory.	Name of secretary or other officer.	Post office address.
RUSSELL.—*Continued.*			
Cumberland	*Normandeau	Octave Normandeau, Prop.	Orleans.
	*Philp's	J. M. Philp, Prop	Sarsfield.
Russell	Craig & Son No. 1	Wm. Craig & Son, Prop.	Russell.
	*Embrun	Raphael Gagnè, Prop.	Embrun.
	Felton (No. 8)	Wm. Eager, Prop	Morrisburg.
	Ridge (No. 29)		
	*Riverside	Petrie & McKeown, Props	Russell.
	South Branch	Mathew Turnbull, Sec	Russell.
	Spring Hill	Hugh A. Lamond, Sec	Dickenson.
	*White Star	R. Long, Prop	Russell.
	*Joint Stock Co.	A. McKeracher, Sec	Marvelville.
CARLETON:			
Fitzroy	Elmdale (Evertts)	D. A. Kennedy, Sec	Elm.
	Riverview	John Stevenson, Prop	Kinburn.
	Union Pride	John Tierney, Sec.-Treas.	Arnprior.
Gloucester	*Blackburn	Thomas, Dagg, Sec	Blackburn.
	*Bowesville	Henry Hardy, Sec	Bowesville.
	Eastman's Springs	Thomas Kettles, Sec.	Ramsay's Corners
	*Leitrim	Henry Cowan, Sec	Leitrim.
	Russell Road	Wm. Lennox, Sec	Hawthorne.
Goulburn	Golden (Con. 5)	Henry Vaughan, Sec	Stapledon.
	*Ashton Union (Con. 8)	Samuel McKittrick, Sec	Ashton.
	Munster (No. 20)	Wm. Eager, Prop	Morrisburg.
	Richmond (No. 21)		
	Ottawa Valley	Adam Abbott, Sec.-Treas	Hazledean.
	*Pleasant Valley (Con. 9)	James McCallum, Sec	Stittsville.
Gower, N	Carsonby	W. G. Godkin, Prop	Carsonby.
	Kidd's No. 1	John Wright, Sec.	North Gower.
	Olive Dale	Cyrus Scobie, Sec.	Kars.
	Wellington (No. 11)	Wm. Eager, Prop.	Morrisburg.
Huntley	Kidd's No. 4	Edward Kidd, Prop	North Gower.
	Maple Leaf	M. K. Evertts & Son, Props.	Easton's Corners.
	Maple Valley		
March	Carleton Model	S. S. Cheetham, Prop.	South March.
	Dunrobin	R. B. Younghusband, Sec.	Dunrobin.
Marlborough	*Burritt's Rapids (P. of I.)	Wm. McKanna, Sec	Burritt's Rapids.
	*Goodstown	John McCordick, Sec.	Goodstown.
	*Malakoff	Claudius Ferguson, Sec.	Malakoff
	*North Rideau	Orlando Bush, Prop	Kemptville.
Nepean	Evertts' No. 1	A. G. Dawson, Sec	Bell's Corners.
	Fallowfield (No. 17)	Wm. Eager, Prop	Morrisburg.
	Merivale (No. 26)		
	Jockvale	Bernard Dunn, Sec.	Jockvale.
	*Twin Elm	E. A. Foster, Sec	Fallowfield.
Osgoode	Allen	Joseph Taylor, Prop	Vernon.
	Ault's Nos. 3 and 4	J. F. Ault, Prop	Shanley.
	Belmont	B. S. McConnell, Prop.	Vernon.
	*Centre Osgoode	D. J. McInnes, Prop	Kenmore.
	Craig & Son No. 2	Wm. Craig & Son, Prop.	Russell.
	Gordon Model	H. D. MacDiarmid, Sec.	Dalmeny.
	Kenmore (No. 16)	Wm. Eager, Prop	Morrisburg.
	Marvelville (No. 9)		
	Osgoode (No. 23)		
	Kidd's No. 3.	Edward Kidd, Prop.	North Gower.
	Metcalfe	W. J. Campbell, Sec	Metcalfe.
	*North Osgoode	H. D. Stewart, Sec	North Osgoode.
	Osgoode Nos. 1 and 2	Robert Pink, Prop	Kemptville.
	*Osgoode	H. D. York, Prop	Metcalfe
	*Rising Sun Ch. Co.	Miss Thompson, Sec	Springhill.
	*Reid's Mills	Wm. Reid, Prop	Reid's Mills.
	*Wide Awake		
	White Globe No. 2	J. R. Daw, Sec	Vernon.
	White Globe No. 3	John McCaul, Sec	Vernon.
	White Globe No. 4	Alton Campbell, Prop.	Ormond.
Torbolton	Daisy	John Stevenson, Prop.	Kinburn.

CHEESE FACTORIES.—*Continued.*

County and Township.	Name of factory.	Name of secretary or other officer.	Post office address.
RENFREW:			
Admaston	Admaston	C. L. McCready, Prop	Balsam Hill.
	*Bonnechere Valley	Thomas Lyons, Sec.	Admaston.
	Union Star	E. H. Tallman, Prop	Easton's Corners.
Alice	Clark's	W. H. Clark, Prop	Pembroke.
	*McGee	G. H. McGee, Prop	Pembroke.
Bagot	*Barryvale	James Barry, Prop	Barryvale.
Bromley	Osceola	Alex. A. Ferrier, Prop.	Osceola.
	*Douglas	Maxwell Gibson, Prop	Douglas.
Brougham	Mountain	J. H. Mundels, Prop.	Lanark
Grattan	*Grattan (D. 2)	George Gibson	Grattan.
McNab	*Burnstown	Croft & Denning, Props.	Middleville.
	New Glasgow	John A. Stewart, Sec.-Treas	Harvey.
	Waba	John Stewart, Sec.-Treas	Waba.
Matawatchan	Matawatchan	Dawson & Wood, Props.	Plevna.
Pembroke	Greenwood (P. of I)	S. S. Luckey, Prop	Pembroke.
Ross	Cobden		
	Forester's Falls	Wm. Grant, Prop	Forester's Falls.
Westmeath	Lily	Hugh Beach, Prop	Beachburg.
	*Westmeath	J. H. Bromley, Prop	Pembroke.
Wilberforce	*Equal Rights	J. L. McGibbon	Eganville.
	Rankin	Thomas Leech, Prop	Rankin.
LANARK:			
Bathurst	*Bathurst Mutual	Thomas B. Radford, Sec	Elliott.
	Clareview	W. A. Moore, Sec.-Treas	Perth.
	Taybanks		
	*Fallbrook	W. G. Cameron, Sec	Fallbrook.
	Harper	Joseph Warren, Sec.-Treas.	Harper.
	Scotch Line	James Fraser, Sec	Scotch Line.
	Tayside	Thomas B. Moore, Sec.-Treas.	Perth.
Beckwith	*Black's Corners	Roger Robertson, Prop	Carleton Place.
	Prospect	James G. Kidd, Sec.-Treas.	Prospect.
	*Tennyson	H. G. Devlin, Prop.	Tennyson.
	Valley Queen	Wm. McDonald, Sec.-Treas.	Franktown.
Burgess, N	North Shore	R. T. Noonan, Sec.	Darcyville.
	Stanleyville	J. H. Singleton, Prop	Newboro'.
Dalhousie	Brookside	W. A. Moore, Sec.-Treas	Perth.
	Watson's Corners		
	Poland	G. W. White, Sec	Poland.
Drummond	*Balderson (Con. 8, Lot 1).	J. C. McGregor	Balderson.
	*Dexter (Con. 3, Lot 15)	Donald McPhail, Prop	McPhail.
	*Drummond Centre (Con. 7, Lot 15)	Daniel Walsh, Sec	Wayside.
	Drummond and Elmsley.	John E. Rice, Sec	Perth.
	Mississippi	C. A. Mathieson, Prop.	Perth.
	Riverside		
Elmsley, N	Elmgrove	J. H. Singleton, Prop.	Newboro'
	Lone Star (Evertts')	B. S. Snyder, Sec.-Treas	Port Elmsley.
Lanark	*Boyd's	Herbert Willows, Sec.	Innisville.
	*Clyde	James Herron, Sec	Herron's Mills.
	Darling and Lanark	John McKay, Sec.-Treas	Hall's Mills.
	Hopetown	John Stewart, Sec	Hopetown.
	Middleville	A. R. McIntyre, Sec.-Treas.	Middleville.
Montague	Cedar Park	M. K. Evertts & Son, Props.	Easton's Corners.
	*Montague	George Leach, Prop	Smith's Falls.
	Roseville	Strong & Clark, Prop	Smith's Falls.
Pakenham	Pakenham	B. W. Dunnett, Prop.	Pakenham.
Ramsay	Appleton	James Wilson, Sec.	Appleton.
	*Clayton	J. F. Drummond, Sec	Clayton.
	*I. X. L.	Hiram McCreary, Sec.	Carleton Place.
	Mississippi Pride	James Caskey, Sec.	Almonte.
	Rosebank	M. K. Evertts & Son, Props.	Easton's Corners.
	Rosedale		
Sherbrooke, S	Bolingbroke	W. A. Moore, Sec.-Tres	Perth.
	Maberly		
	*Lakeview	Wm. Mitchell	Althorpe.

CHEESE FACTORIES.—*Continued.*

County and Township.	Name of factory.	Name of secretary or other officer.	Post office address.
VICTORIA:			
Eldon	*Lapp's	Jeremiah Lapp, Prop	Lorneville.
	*Lorneville	James McAlpine	Lorneville.
Emily	*Downeyville	Joseph Lucas, Sec	Downeyville.
Fenelon	*Cambray	E. G. Lytle, Sec	Cambray.
	Cameron	Manley Maybee, Sec	Cameron.
Mariposa	Little Britain	O. J. B. Yearsly, Prop	Little Britain.
	*Manilla	W. White, Sec	Manilla.
	Mariposa	David Rogers, Sec-Treas	Linden Valley.
	*Valentia	George Webster, Sec	Valentia.
Ops	North Ops	John Jackson, Sec.-Treas	Lindsay.
	*Reaboro	Joseph Brown, Prop	Reaboro'.
Somerville	Kinmount (Webb's)	J. Kingsboro', Sec	Kinmount.
Verulam	Bobcaygeon	George W. Taylor, Sec	Bobcaygeon.
	*Dunsford	Edward Thurston, Prop	Dunsford.
	North Verulam	Emerson Tiers, Sec.-Treas	Fairbairn.
	Star	Morgan Johns, Sec.-Treas	Bobcaygeon.
PETERBOROUGH:			
Asphodel	Daisy D.	H. W. McMaster, Sec	Norwood.
	Norwood	Hugh Spencer, Prop	Norwood.
	Ormond	James O'Reilly, Sec	Hastings.
	Westwood	Ryan & Thompson, Props	Westwood.
Anstruther	Apsley	Wm. Wilson, Prop	Apsley.
Belmont	*Melrose Abbey	Frank Parker, Prop	Norwood.
	Round Lake	Michael McNicholl, Prop	Havelock.
	Star	John Kitchen, Prop	Preneveau.
	Trentbridge	Stephen Watson, Prop	Havelock.
	*Victoria	Charles Wilde, Sec	Blairton
Chandos	Chandos	J. W. Ratcliff, Pres	Lasswade.
	Clydesdale	John Minogue, Prop	Chandos.
Douro	Maple Leaf	George Brooks, Prop	Douro.
	Pine Grove	R. H. Little, Prop	Lakefield.
Dummer	North Dummer	Frank Darling, Sec	Hall's Glen.
	Oakdale	S. S. Spence, Prop	South Dummer.
	Stony Lake	James Robb, Sec	Stony Lake.
	Warminster	S. R. Payne, Sec	Warsaw.
	Warsaw		
Harvey	Cedardale	Wm. Weir, Sec	Lakehurst.
Methuen	Vansickle	John Vansickle, Prop	Wariston.
Otonabee	Keene	D. P. McFarlan, Sec	Keene.
	Lang	Wm. Weir, Prop	Lang.
	Otonabee Union	George Stewart, Sec	Peterborough.
	Peterborough	W. G. Wood, Prop	Peterborough.
	Shearer	John Miller, Sec.-Treas	Lang.
Smith	Central Smith	Andrew Young, Pres	Peterborough.
	Cherry Grove	R. C. Humphries, Prop	Westwood.
	*Lakefield	J. G. Galvin, Sec	Lakefield.
	Lakeview	Ernest Mann, Prop	Bridgenorth.
	*Missing Link	Frank Sager, Prop	Peterborough.
	*North Smith	M. E. Sanderson, Pres	Selwyn.
	Trewern	John I. Chittick, Prop	Peterborough.
HALIBURTON:			
Cardiff	*Deer Lake	A. W. Willis, Sec	Deer Lake.
Dysart	Dysart	Edward Holmes, Sec	Haliburton.
	Haliburton	Fred. Freeman, Sec	Haliburton.
Minden	*Dummitt's	Joseph Dummitt, Prop	Haliburton.
	Minden	John H. Delamere, Sec	Minden.
Monmouth	*Wilberforce	Alex. Riley, Sec	Wilberforce.
Stanhope	Stanhope	Thomas Godwin, Prop	Barkway.
HASTINGS:			
Carlow	Carlow	Andrew White, Sec	Fort Stewart.
Dungannon	Bancroft	Fred. Mallett, Prop	Bancroft.
	L'Amable	B. Spurr, Pres	L'Amable.
	Walkerville	D. Kavanagh, Pres	Umfraville.
Elzevir	*Elzevir	Thomas Moore	Queensborough.
	Marble Spring	J. S. Dougan, Sec	Actinolite.
Faraday	Page Road	Henry Foster, Pres	Faraday.

NOTE.—Downeyville factory (Victoria Co.) was burned down in November, 1895.

CHEESE FACTORIES.—*Continued.*

County and Township.	Name of factory.	Name of secretary or other officer.	Post office address.
HASTINGS.—*Continued* ...			
Herschel	*Beechmont	Manley Valleau, Pres	Bancroft.
	Bird's Lake	H. C. Zabell, Pres	Bird's Creek.
Hungerford	*Cedar	Andrew Kirk, Prop	Chapman.
	*Clair River	John W. Beatty, Pres	Bogart.
	*Goose Creek	James Stinson	Marlbank.
	Marlbank	A. A. Allen, Sec.-Treas	Marlbank.
	Moira Valley	John Stokes, Pres	Thomasburg.
	Moneymore	John Thompson, Sec.-Treas	Moneymore.
	Murphy	Patrick Murphy, Prop	Stoco.
	*Premier	T. E. Willson, Pres	Thomasburg.
	Rock	Joseph Gabourie, Prop	Tweed.
	*Roblin	James Clare, Pres	Chapman.
	*Stoco	S. C. Mulroney, Pres	Stoco.
	*Thomasburg	Murney Coulter, Pres	Thomasburg.
	*Tweed	Thomas Graham, Pres	Tweed.
	*Victoria	Robert Sayers, Pres	Tweed.
Huntingdon	Beulah	John Fleming, Pres	Ivanhoe.
	Daisy	John O'Reilly, Pres	Madoc.
	*Glen	Samuel Ray, Pres	Fuller.
	*Moira	David Corrigall, Pres	Moira.
	West Huntingdon	James Haggarty, Pres	W. Huntingdon.
	*White Lake	Hector Wood, Pres	Ivanhoe.
Lake	Glanmire and Thanet.	D. Lummis, Pres	Glanmire.
Limerick	*St. Ola	Peter P. Clark	St. Olo.
McClure	McClure	James Taylor, Sec	Maynooth.
Madoc	Alexandria	W. H. Dingman, Sec	Madoc.
	*Brook Valley	Thos. E. Burnside, Pres	Hazzard's Corners.
	Coldsprings	A. M. Ketcheson, Pres	Hazzard's Corners.
	*Golden	James English, Pres	Madoc.
	*Madoc	A. Thompson, Pres	Queensborough.
	Oak Leaf	C. W. Thompson, Sec	Cooper.
	*Spring Creek	John Irwin, Pres	Remington.
	Spring Hill	Donald McKenzie, Pres	Madoc.
Marmora	Balsam Grove	Thomas Moffatt, Pres	Malone.
	Cook's	Porter Preston, Pres	Blairton.
	*Deloro	Daniel Neil, Pres	Malone.
	Marmora	Wm. Hilton, Pres	Marmora.
	Riverside	Michael Sullivan, Sec.-Treas	Marmora.
Mayo	*Carlow and Mayo	W. J. Douglas, Sec	Fort Stewart.
	*Mayo and Raglan		
	*Mayo and Dungannon	George Sager	Egan Creek.
Monteagle	Greenview	Edward Livick, Sec	Greenview.
	Hybla	Arthur W. Bartlett, Pres	Monteagle Valley
Rawdon	*Barton	Mr. Barton, Prop	Harold.
	Bell	John T. Bateman, Pres	Springbrook.
	*Big Springs	James McComb, Pres	Big Springs.
	*Central	G. A. Johnson, Pres	Anson.
	Enterprise	Richard Clements, Pres	Stirling.
	Evergreen	Robert Lanigan, Pres	Stirling.
	*Harold	John Tanner, Pres	Harold.
	Kingston	J. T. Belshaw, Pres	Stirling.
	Maple Leaf	Wm. Meiklejohn, Pres	Big Springs.
	*Monarch	Nelson Sexsmith	Springbrook.
	Plum Grove	Fred. Fanning, Pres	Wellman's Corners.
	Springbrook	Levi Mason, Pres	Springbrook.
	Spry	W. J. Spry, Prop	Bigsprings.
	Stirling	James Scott, Pres	Sine.
Sidney	Bayside	James Knox, Pres	Belleville.
	*Eclipse	James Bird, Pres	Stirling.
	*Frankford	Dr. J. U. Simmons, Pres	Frankford.
	Grove	B. Mallory, Sec.-Treas	Frankford.
	*Ketcheson	F. J. Knight, Pres	Belleville.
	Shamrock	Oakley Vandervoort, Pres	Stirling.
	Sidney	J. R. Brower, Pres	Belleville.
	*Sidney Town Hall	S. T. Wilmot, Pres	Wallbridge.
	Springfield	Thomas Steele, Pres	Trenton.

CHEESE FACTORIES.—*Concluded.*

County and Township.	Name of factory.	Name of secretary or other officer.	Post office address.
HASTINGS.—*Continued.*			
Thurlow	Ashley	W. H. Falconer, Pres	Foxborough.
	Bronk	James Boldrick, Pres	Corbyville.
	*East Hastings	Albert Pitman, Pres	Plainfield.
	Halloway	Adam Rushnell, Pres	Halloway.
	*Plainfield	John Clark, Pres	Latta.
	Roslin	Nelson Sills, Pres	Roslin.
	Thurlow	O. R Weese, Pres	Belleville.
	Union	F. Brenton, Pres	Corbyville.
	*Zion	Wm. Sills, Pres	Foxborough.
Tudor	Millbridge	S. L Golding, Prop	Millbridge.
	*Silver	Thomas Ricketts	Gilmour.
Tyendinaga	*Albert	Michael Corrigan, Pres	Albert.
	Deseronto	E. W. Rathbun, Pres	Deseronto.
	*Empey Hill	Peter Gould, Prop	Napanee.
	Melrose	Wm. A. Osborne, Pres	Melrose.
	Mountain	R. L. Lazier, Pres	Shannonville.
	*Read	A. McCormick, Pres	Naphan.
	*Rosebud	G. Foley, Pres	Myrehall.
	Shannonville	Wm. Clazie, Sec.-Treas	Shannonville.
Wollaston	Coe Hill	George Pattison, Pres	Coe Hill.
	Ormsby	H. Beaumont, Pres	Ormsby.
MUSKOKA:			
Muskoka	Muskoka	Angus Morrison, Pres	Reay.
Watt	Watt	H. W. Gill, Sec.-Treas	Ufford.
PARRY SOUND:			
Carling	Carling	J. C. Huff, Sec.-Treas	Shebeshekong.
	†McKellar	John Thompson, Pres	McKellar.
Humphrey	Ashdown	A. T. Sirett, Sec	Ashdown.
Machar	*Clearwater	A. Smyth, Sec	Midford.

CREAMERIES OPERATED IN THE PROVINCE OF ONTARIO.

Creameries operated in winter are marked (W.) and in summer (S.)

ELGIN:			
Aldborough	*Old Rodney (W. and S.)	G. H. Katzenmeier	Rodney.
	*Terry's (W. and S.)	Edwin Terry, Prop	Aldborough.
Bayham	†Corinth	Joint Stock Co	Corinth.
Dorchester, S	†Avon (W.)	Wm. Morris, Prop	Avon.
Yarmouth	*Mapleton (W.)	John Brodie, Prop	Mapleton.
NORFOLK:			
Windham Centre	*Windham Centre (W.)	John Gardham	Windham Centre.
WELLAND:			
Wainfleet	*Star (S.)	Frank E. Misener	Marshville.
LAMBTON:			
Plympton	Wanstead (S.)	A. Wark	Wanstead.
HURON:			
Stephen	Jersey (W. and S.)	A. Q. Bolmer	Exeter.
Hullett	†Londesborough (S.)	W. L. Osmette (In liquidation)	Londesborough.
McKillop	*Seaforth		
Tuckersmith	*Brucefield (S.)	Hugh McCartney, Prop	Brucefield.
Usborne	Winchelsea (S.)	Joshua Johns, Sec	Elimville.
BRUCE:			
Brant	*Walkerton (S.)	James Carter, Manager	Walkerton.
Carrick	*Mildmay (S.)	James Johnston, Sec	Mildmay.
Culross	Eskdale (S.)	E. G. Kuntz, Sec	Formosa.
	Star (S.)	S. R. Brill, Sec	Teeswater.
Elderslie	Chesley (S.)	Halliday & Co., Props	Chesley.
	*Paisley (S.)	A. E. Wark, Manager	Wanstead.
Kinloss	Whitechurch (S.)	Frank Henry, Pres	Whitechurch.
GREY:			
Bentinck	Lamlash (S.)	W. J. Earle, Sec	Lamlash.
Derby	Owen Sound (S.)	D. Dunlop, Sec	Owen Sound.
	Pleasant View (S.)	James Struthers, Prop	Owen Sound.
Egremont	*Dromore (S.)	John Philp, Sec	Dromore.

CREAMERIES.—*Continued.*

County and Township.	Name of factory.	Name of secretary or other officer.	Post office address.
GREY.—*Continued.*			
Egremont	Egremont (S.)	H. Ham, Sec	Holstein.
	South Bend (S.)	James Sharp, Sec	Mount Forest.
Normanby	*Ayton (S.)	A. Wenger, Prop	Ayton.
	*Saugeen Valley (S.)	Daniel Eckstein	Neustadt.
St. Vincent	*Meaford (S.)	Rorke Bros., Props	Meaford.
Sullivan	Sullivan (S.)	Halladay & Bearman	Desboro'.
SIMCOE:			
Oro and Vespra	†Barrie (S.)	R. A. Thomas, Prop	Barrie.
MIDDLESEX:			
Dorchester, N	Gladstone (W.)	B. Swales, Sec	Gladstone.
London	*London (W.)	Wm. Geary, Prop	London.
	*Medway (W. and S.)	James Carmichael, Prop	Arva.
OXFORD:			
Blandford	Sprucedale (W. and S.)	Wm. C. Shearer, Prop	Bright.
Dereham	*Butler's (W. and S.)	Wm. Butler, Prop	Dereham Centre.
	Culloden (W. and S.)	Wm. A. Edgar, Prop	Culloden.
	*Mount Elgin (W. and S.)	Wm. Pow, Sec	Mount Elgin.
	*Verschoyle (W.)	S. R. Gill, Sec	Verschoyle.
Nissouri, E	†Kintore Branch (W.)	Thomas W. Alderson, Prop	Kintore.
Norwich, N	*Burgessville (W.)	C. W. Riley, Prop	Ingersoll.
	*Losee (Separator)	John McKee, Sec	Norwich.
	*Norwich Junction (W.)		
Norwich, S	*Springford	J. Anstice, Sec	Springford.
Oxford, E	Woodstock (W.)	James Curry, Sec	Woodstock.
Oxford, N	†Beachville	James Ireland, Prop	Beachville.
Oxford, W	*West Oxford (W.)	G. H Cook, Pres	Ingersoll.
BRANT:			
Brantford	North Brant (W.)	John German, Sec	St. George.
PERTH:			
Downie	Avonbank (W.)	Wm. Tier, Sec	Motherwell.
	Black Creek (W.)	Thos. Ballantyne, Prop	Stratford.
WELLINGTON:			
Garafraxa	*Spring Brook (S.)	George Martin, Sec	Belwood.
Nichol	*Kinnettles	Aaron Wenger, Prop	Ayton.
Puslinch	Aberfoyle (S.)	J. A. Cockburn, Sec.-Treas	Aberfoyle.
WATERLOO:			
Dumfries, N	*Elliott (Private) (S.)	Andrew Elliott, Prop	Galt.
Wellesley	Crosshill (S.)	J. G. Reiner, Pres	Wellesley.
	*Bamberg	F. Walter, Pres	Bamberg.
Wilmot	Nith Valley (S.)	Solomon Shantz, Sec	Haysville.
Woolwich	*St. Jacobs	Brubacher & Snyder, Props	St. Jacobs.
WENTWORTH:			
Beverly	*Hunter's (S. and W.)	Samuel Hunter, Prop	Rockton.
Binbrook	*Woodburn (W.)	Arthur Edwards, Sec	Woodburn.
HALTON:			
Esquesing	*Dunstaffinish (S.)	G. W. Black	Scotch Block.
	*Little Falls (S.)	Wm Ryder	Georgetown.
Nassagaweya	*Haltonville	J. G. Carter	Nassagaweya.
Trafalgar	*Milton	W. B. Cockburn	Milton.
PEEL:			
Caledon	*Credit Valley (S.)	J. Russell	Alton.
YORK:			
Markham	Locust Hill (W. and S.)	A. Forster, Sec	Locust Hill.
	*Unionville (W. and S.)	Oliver Harding, Pres	Milliken.
Vaughan	Maple (W. and S.)	R. S. Thomson, Sec	Maple.
	*Woodbridge (W. and S.)	J. G. Hallett, Sec	Woodbridge.
Whitchurch	*Gormley (W.)	Bruce Bros., Props	Gormley.
	Stouffville (W. and S.)	H. Johnson, Sec	Stouffville.
ONTARIO:			
Pickering	Greenwood (W. and S.)	F. L. Green, Sec	Greenwood.
NORTHUMBERLAND:			
Percy	*Warkworth (W.)	Wm. Bensley, Prop	Warkworth.
PRINCE EDWARD:			
Ameliasburg	*Bayside (W. and S.)	Phillips Bros., Props	Rednersville.
	*Island (W. and S.)	Elias Wallbridge, Prop	Belleville.
	Quinte (S.)	Alex. H. Anderson, Sec	Rossmore.
	Sprague (S.)	John Sprague, Prop	Ameliasburg.
Sophiasburg	*Big Island (S.)	J. A. Sprague	Demorestville.

CREAMERIES.—*Continued.*

County and Township.	Name of factory.	Name of secretary or other officer.	Post office address.
LENNOX AND ADDINGTON:			
Camden	Newburgh (W. and S.)	G. A. Aylesworth, Sec	Newburgh.
Fredericksburg, N	Palace Road (W.)	M. N. Empey, Sec	Napanee.
LEEDS:			
Bastard	†Chantry	Strong & Davison, Props	Delta.
Crosby, S	*Elgin Model (W.)	Murphy & Dargavel, Props	Elgin.
	Maple Grove (W. and S.)	A. D. Delong	Elgin.
	Ontario (W.)	J. H. Singleton, Prop	Newboro'.
Elizabethtown	*Barlow (W.)	R. Barlow, Sec	Addison.
	Elizabethtown (W. and S.)	T. W. Horton, Sec	New Dublin.
	*Palace (W.)	P. W. Strong	Brockville.
Leeds Rear	*Gilt Edge	Ed. Coleman, Sec	Seeley's Bay.
Yonge and Escott	Johnson's (S.)	R. E. Cornell, Sec	Elbe Mills.
	*Mallorytown (W.)	O. Forrester, Pres	Mallorytown.
GRENVILLE:			
Edwardsburg	*Spencerville (W.	Miller and Ferguson, Props.	Spencerville.
	Ventnor (S.)		
Oxford	Graham (S.)	E. H. Graham, Sec	Millar's Corners
	*Oxford Mills (S)	Levi Patton, Prop	Oxford Mills.
DUNDAS:			
Matilda	Advance No. 2 (S.)	W. J. Sharra, Sec	Glen Stewart.
	*Hainsville (S.)	Banford & Johnston, Props	Hainsville.
	*Rutherford's	W. D. Rutherford, Prop	Haddo.
	St. Lawrence (W. and S.)	W. C. Binion, Prop	Iroquois.
Mountain	*Scott's (W.)	Edward Scott	Heckston.
Williamsburg	*Dunbar	M. Carlyle, Sec	Dunbar.
	*North Williamsburg (S.)	J. J. Dickey, Sec	Brockville.
Winchester	Winchester (Skimming Station)	S. S. Reveler, Sec	Winchester.
STORMONT:			
Finch	Cannamore (W. and S.)	Wm. Campbell, Sec	Cannamore.
	Goldfield (W.)	J. MacHoover	Goldfield.
Osnabruck	Clover Leaf (W. and S.)	Croil & McCullough, Props.	Montreal, Que.
	Stormont (W. and S.)		
GLENGARRY:			
Charlottenburg	Glen Gordon (W.)	D. M. Macpherson, Prop	Lancaster.
	Martintown (W.)		
	Cote		
	*Martintown (W.)	Wm. Irvine, Prop	Martintown.
	South Branch (W. and S.)	Benj. Clark, Sec	Cashion's Glen.
	*Summerstown, Sta	Allan P. McDonald, Sec	Williamstown.
Kenyon	*St. Elmo (S.)	Binion & Rutherford, Props	Iroquois.
Lancaster	Home (W.)	D. M. Macpherson, Prop	Lancaster.
	Lancaster (S.)	W. C. Binion, Prop	Iroquois.
RUSSELL:			
Russell	*St. Onge Butter Co. (S.)	C. St. Onge, Pres	St. Onge.
RENFREW:			
Horton	Renfrew (W. and S.)	James Craig, Sec	Renfrew.
PETERBOROUGH:			
Dummer	†Warsaw (W.)	S. R. Payne, Sec	Warsaw.
Smith	Lakefield (W.)	F. E. Kline, Sec	Lakefield.
	*North Smith	M. E. Sanderson, Pres	Selwyn.
HASTINGS:			
Hungerford	Hungerford (W.)	Thos. N. Johnston, Auditor	Chapman.
Rawdon	Plum Grove (W.)	James White, Prop	Wellman's Cor's
Sidney	*Frankford (S.)	J. U. Simmons, Sec	Frankford.
Tyendinaga	Deseronto (W. and S.	R. Rayburn, Sec	Deseronto.

CONDENSED MILK. A factory for the manufacture of condensed milk is operated at Aylmer (Elgin Co.) by Messrs. Marshall & Allworth.

NOTE.—Frankville and Newbliss factories in Kitley are being fitted up with creamery apparatus.

Clover Leaf brand is churned in Montreal. The seven skimming stations in Ontario are Mountain, Suffel and Winchester in Dundas, Finch, Newington and Ormond in Stormont, and Glen Roy in Glengarry.

Renfrew creamery has seven skimming stations, three in Horton, one each in Admaston, Bagot, Ross and Fitzroy.

ONTARIO CHEESE AND BUTTER BOARDS, 1896.

Board.	Secretary.	P. O. Address.
Belleville	B. C. McCargar	Belleville.
Brantford	W. S. Campbell	Brantford.
Brockville	C. J. Gilroy	Glen Buell.
Campbellford	John Givan	Campbellford.
Guelph	A. Curzon	Guelph.
Ingersoll	W. R. Smith	Ingersoll.
Iroquois	R. D. Harkness	Iroquois.
Kingston	L. L. Gallagher	Wilton.
Listowel	Wm. Climie	Listowel.
London	J. A. Nelles	London.
Madoc	Thomas E. Burnside	Madoc.
Napanee	W. R. Gordanier	Napanee.
*Newmarket	C. E. Lundy	Newmarket.
Peterborough	James Middleton	Peterborough.
Picton	Edmond Roblin	Picton.
Shelburne	J. T. Henstreet	Shelburne.
Stirling	A. Chard	Stirling.
Woodstock	John Nancekivell	Woodstock.

* Meets at Barrie.

LIST OF DAIRY INSPECTORS AND INSTRUCTORS.

Western Ontario	J. W. Wheaton	London.
	T. B. Millar	London.
Eastern Ontario:		
Brockville District	G. G. Publow	Perth.
Morrisburg	A. P. Purvis	Maxville.
Peterborough and Belleville	W. W. Grant	Peterborough.
Kingston and Napanee	George Bensley	Warkworth.
Creameries	Marcus Sprague	Ameliasburg.

DAIRY SCHOOLS OF ONTARIO.

UNDER THE CONTROL OF THE MINISTER OF AGRICULTURE FOR ONTARIO.

Director	Dr. James Mills	Guelph.
Resident Superintendents:		
Agricultural College	Prof. H. H. Dean, B.S.A	Guelph.
Kingston	J. A. Ruddick	Kingston.
Strathroy	F. J. Sleightholm, B.S.A	Strathroy.

STATISTICS OF

LIVESTOCK AND DAIRY PRODUCTS.

HORSES AND HOGS.

TABLE I. Showing by County Municipalities and Groups of Counties the number of Horses and Hogs in Ontario in the years 1894 and 1895.

Counties.	Horses.					Hogs.			
	Working horses.	Breeding mares.	Unbroken horses.	Totals.		Over 1 year.	Under year.	Totals.	
				1895.	1894.			1895.	1894.
Essex	10,510	1,575	3,811	15,896	17,272	14,718	46,480	61,198	55,609
Kent	13,568	2,304	5,508	21,380	22,877	11,394	52,078	63,472	54,711
Elgin	10,546	1,845	3,967	16,358	16,889	8,231	44,567	52,798	43,560
Norfolk	8,999	1,010	3,416	13,425	14,521	5,556	28,912	34,468	30,449
Haldimand	7,522	1,264	2,895	11,681	11,912	3,026	17,142	20,168	17,501
Welland	6,952	789	2,230	9,971	9,945	2,005	11,000	13,005	10,706
Totals	58,097	8,787	21,827	88,711	93,416	44,930	200,179	245,109	212,536
Lambton	11,009	1,920	4,450	17,379	18,323	5,856	28,851	34,707	26,847
Huron	18,362	3,927	7,252	29,541	31,511	8,259	41,682	49,941	41,206
Bruce	14,602	2,963	5,519	23,084	23,104	6,386	29,943	36,329	31,390
Totals	43,973	8,810	17,221	70,004	72,938	20,501	100,476	120,977	99,443
Grey	19,278	3,617	6,387	29,282	30,659	9,356	41,601	50,957	47,167
Simcoe	18,205	3,082	6,319	27,606	28,801	12,683	53,071	65,754	59,481
Totals	37,483	6,699	12,706	56,888	59,460	22,039	94,672	116,711	106,648
Middlesex	19,363	3,443	8,345	31,151	32,184	8,791	48,141	56,932	47,191
Oxford	12,619	2,147	4,797	19,563	20,487	7,333	43,306	50,639	43,897
Brant	6,769	912	2,584	10,265	10,461	3,692	20,990	24,682	20,705
Perth	13,452	3,017	5,814	22,283	22,705	6,049	33,214	39,263	34,440
Wellington	16,389	2,910	5,736	25,035	25,239	7,566	45,542	53,108	44,051
Waterloo	8,937	1,456	2,681	13,074	13,542	3,763	24,261	28,024	20,987
Dufferin	6,480	1,358	2,384	10,222	10,621	4,948	18,479	23,427	20,263
Totals	84,009	15,243	32,341	131,593	135,239	42,142	233,933	276,075	231,534
Lincoln	7,114	631	2,006	9,751	10,127	1,969	11,631	13,600	11,899
Wentworth	8,339	1,133	2,493	11,965	12,716	3,091	18,748	21,839	18,128
Halton	6,336	890	1,668	8,894	8,835	2,347	14,373	16,720	14,369
Peel	8,299	1,799	3,322	13,420	13,592	5,089	24,871	29,960	26,264
York	16,666	3,093	6,138	25,897	26,854	7,321	41,474	48,795	43,764
Ontario	12,328	2,556	5,454	20,338	21,602	6,884	35,188	42,072	36,242
Durham	9,854	1,674	4,069	15,597	16,224	4,936	22,859	27,795	23,359
Northumberland	11,464	1,750	4,426	17,640	18,241	5,256	25,190	30,446	26,464
Prince Edward	6,935	831	2,482	10,248	11,771	1,924	9,274	11,198	11,292
Totals	87,335	14,357	32,058	133,750	139,962	38,817	203,608	242,425	211,781
Len'x & Addington	6,996	705	2,482	10,183	10,726	3,006	10,668	13,674	11,588
Frontenac	6,511	777	1,966	9,254	9,779	2,717	10,713	13 430	12,941
Leeds	8,329	834	2,071	11,234	11,510	6,074	19,386	25,460	23,502
Grenville	5,269	452	1,561	7,282	7,484	3,539	9,267	12,806	12,558
Dundas	5,429	636	1,589	7,654	8,204	2,997	10,361	13,358	13,211
Stormont	4,646	653	1,485	6,784	7,490	2,715	6,741	9,456	8,563
Glengarry	5,894	1,576	2,105	9,575	9,803	3,930	9,221	13,151	11,329
Prescott	4,898	992	1,440	7,330	8,196	4,072	8,123	12,195	12,295
Russell	3,105	634	933	4,672	4,944	2,967	5,142	8,109	8.435
Carleton	10,371	1,971	3,583	15,925	16,016	5,594	18,999	24,593	23,712
Renfrew	8,659	1,678	2,725	13,062	12,934	8,929	17,895	26,824	24,494
Lanark	7,801	887	1,834	10,522	11,377	4,030	16,419	20,449	19,970
Totals	77,908	11,795	23,774	113,477	118,463	50,570	142,935	193,505	182,598
Victoria	8,809	1,440	3,219	13,468	14,787	5,015	19,817	24,832	23,096
Peterborough	7,163	1,158	2,482	10,803	11,631	4,514	14,817	19,331	18,530
Haliburton	1,035	431	516	1,982	1,757	813	2,245	3,058	3,090
Hastings	11,718	1,709	3,538	16,965	17,585	9,876	27,114	36,990	34,652
Totals	28,725	4,738	9,755	43,218	45,760	20,218	63,993	84,211	79,368
Muskoka	1,946	482	630	3,058	3,088	1,031	3,559	4,590	4,514
Parry Sound	1,712	514	604	2,830	2,496	1,290	3,746	5,036	4,624
Nipissing	536	180	147	863	924	692	1,256	1,948	1,948
Algoma	1,949	551	804	3,304	3,031	1,955	6,530	8,485	7,139
Totals	6,143	1,727	2,185	10,055	9,539	4,968	15,091	20,059	18,225
The Province	423,673	72,156	151,867	647,696	674,777	244,185	1,054,887	1,299,072	1,142,133

CATTLE.

TABLE II. Showing by County Municipalities and Groups of Counties the number of Cattle in Ontario in the years 1894 and 1895.

Counties.	Working oxen.	Milch cows.		Store cattle over 2 years.		Young and other cattle.	Total cattle.	
		1895.	1894.	1895.	1894.		1895.	1894
Essex	16	13,365	13,197	4,928	6,151	13,783	32,092	33,498
Kent	64	16,342	15,953	10,233	11,820	19,811	46,450	48,883
Elgin	62	20,094	18,887	9,667	10,026	19,685	49,508	49,853
Norfolk	162	16,127	15,143	4,173	3,402	13,665	34,127	33,461
Haldimand	11	12,858	12,265	4,773	3,897	13,511	31,153	29,672
Welland	71	9,315	8,675	3,032	2,644	9,047	21,465	20,214
Totals	386	88,101	84,120	36,806	38,450	89,502	214,795	215,611
Lambton		18,289	17,653	15,700	16,419	28,464	62,453	62,891
Huron	218	31,602	30,593	28,001	29,145	51,732	111,553	110,781
Bruce	231	29,920	26,876	23,263	25,306	43,763	97,177	95,041
Totals	449	79,811	75,122	66,964	70,870	123,959	271,183	268,713
Grey	397	37,264	35,875	24,599	24,610	57,427	119,687	119,054
Simcoe	229	27,761	26,851	18,088	17,903	37,160	83,238	82,275
Totals	626	65,025	62,726	42,687	42,513	94,587	202,925	201,329
Middlesex		39,055	36,122	24,042	27,442	41,559	104,656	107,130
Oxford	16	36,223	34,114	13,214	14,987	24,653	74,106	75,046
Brant		11,337	11,500	2,959	2,291	12,062	26,358	26,249
Perth		30,692	28,578	15,683	16,002	37,915	84,290	81,619
Wellington	133	28,518	25,535	17,174	16,889	41,184	87,009	80,487
Waterloo	36	14,048	13,292	4,701	5,254	15,696	34,481	34,261
Dufferin	77	11,123	10,400	7,503	8,077	15,677	34,380	33,621
Totals	262	170,996	159,541	85,276	90,942	188,746	445,280	438,413
Lincoln	4	8,576	8,015	1,958	2,171	8,021	18,559	17,688
Wentworth	25	14,699	14,089	4,091	3,448	14,320	33,135	31,062
Halton	13	11,074	10,202	5,038	4,839	11,512	27,637	26,086
Peel		13,287	12,998	6,312	4,958	12,804	32,403	30,664
York	74	23,728	21,126	7,853	7,107	18,463	50,118	45,958
Ontario	24	19,113	17,957	9,422	9,457	27,898	56,457	53,843
Durham	69	14,321	12,896	7,294	7,224	17,792	39,476	37,692
Northumberland	46	22,595	21,465	5,702	6,099	18,020	46,363	46,423
Prince Edward	12	12,203	11,836	2,179	1,836	8,120	22,514	21,951
Totals	267	139,596	130,584	49,849	47,139	136,950	326,662	310,767
Lennox and Addington	209	18,539	16,648	4,649	6,199	13,185	36,582	37,270
Frontenac	96	20,447	18,937	4,300	4,860	14,728	39,571	38,718
Leeds		32,982	32,336	4,685	5,090	15,609	53,276	52,380
Grenville		19,227	18,940	2,356	2,257	8,839	30,422	30,560
Dundas	12	19,777	18,344	1,700	2,166	9,909	31,398	30,230
Stormont		16,909	16,334	2,179	2,217	9,022	28,110	26,678
Glengarry		21,775	19,395	2,231	2,280	12,792	36,798	33,527
Prescott		17,090	15,666	2,811	2,759	10,071	29,972	28,278
Russell	49	10,461	8,862	2,598	2,366	7,261	20,360	18,340
Carleton	35	31,646	28,130	9,549	9,025	24,066	65,296	59,908
Renfrew	228	22,449	19,918	8,415	8,922	24,953	56,045	52,594
Lanark	35	24,477	23,784	8,894	8,478	21,445	54,851	53,499
Totals	655	255,779	237,244	54,367	56,619	171,880	482,681	461,882
Victoria	85	13,161	13,389	8,230	9,621	19,942	41,418	44,144
Peterborough	117	16,459	16,008	5,987	5,693	16,382	38,945	38,363
Haliburton	167	3,014	2,901	1,251	1,327	4,347	8,779	8,897
Hastings	274	42,022	39,494	7,387	6,827	23,830	73,513	69,600
Totals	643	74,656	71,792	22,855	23,468	64,501	162,655	161,014
Muskoka	315	4,865	4,496	2,342	2,251	6,887	14,409	13,755
Parry Sound	310	4,097	3,747	1,920	2,040	6,094	12,421	11,949
Nipissing	89	1,076	938	507	430	1,456	3,122	2,687
Algoma	268	4,232	3,927	2,071	2,027	7,399	13,970	13,181
Totals	982	14,264	13,108	6,840	6,808	21,836	43,922	41,572
The Province	4,270	888,228	834,237	365,644	376,809	891,961	2,150,103	2,099,301

SHEEP AND POULTRY.

TABLE III. Showing by County Municipalities and groups of Counties the number of Sheep and Poultry in Ontario in the years 1894 and 1895.

Counties.	Sheep.				Poultry.				
	Over 1 year.	Under 1 year.	Totals.		Turkeys	Geese.	Other fowls.	Totals.	
			1895.	1894.				1895.	1894.
Essex	16,501	13,553	30,054	31,058	17,238	10,764	204,029	232,031	226,805
Kent	23,853	21,655	45,508	44,573	17,524	10,099	209,221	236,844	215,838
Elgin	26,803	24,471	51,274	55,589	20,011	6,388	152,768	209,167	195,679
Norfolk	21,466	17,889	39,355	39,468	11,612	6,891	140,539	159,042	146,909
Haldimand	18,886	17,408	36,294	33,132	9,234	6,248	111,000	126,482	121,713
Welland	14,344	12,435	26,779	25,232	8,104	2,651	117,931	128,686	122,102
Totals	121,853	107,411	229,264	229,052	83,723	43,041	965,488	1,092,252	1,029,046
Lambton	31,048	31,322	62,370	65,013	20,939	8,573	193,245	222,757	208,605
Huron	55,700	53,592	109,292	112,795	31,371	23,232	323,733	378,336	369,479
Bruce	62,332	57,450	119,782	116,951	19,180	19,681	222,038	260,899	247,284
Totals	149,080	142,364	291,444	294,759	71,490	51,486	739,016	861,992	825,368
Grey	85,822	69,490	155,312	159,242	21,144	20,246	278,450	319,840	331,517
Simcoe	63,815	48,487	112,302	106,447	24,182	23,208	268,712	316,102	319,826
Totals	149,637	117,977	267,614	265,689	45,326	43,454	547,162	635,942	651,343
Middlesex	41,169	38,266	79,435	81,534	53,131	14,221	325,133	392,485	379,560
Oxford	13,917	13,682	27,599	29,414	15,758	6,726	192,374	214,858	204,627
Brant	11,611	10,780	22,391	21,619	6,015	3,389	90,198	99,602	100,910
Perth	30,548	28,896	59,444	61,008	18,558	16,850	241,689	277,097	274,180
Wellington	53,413	48,602	102,015	94,859	26,098	19,107	231,330	276,535	263,116
Waterloo	19,662	15,191	34,853	37,112	7,358	5,061	143,758	156,177	157,446
Dufferin	20,182	16,203	36,385	34,642	14,102	11,315	95,059	120,476	118,810
Totals	190,502	171,620	362,122	360,188	141,020	76,669	1,319,541	1,537,230	1,498,649
Lincoln	12,947	11,521	24,468	24,074	7,730	2,749	107,110	117,589	113,050
Wentworth	16,269	15,282	31,551	31,029	10,625	6,802	124,895	142,322	129,927
Halton	12,911	11,109	24,020	22,813	8,883	6,990	84,003	99,876	105,172
Peel	16,207	13,140	29,347	28,650	19,833	10,823	139,957	170,613	170,283
York	31,682	23,786	54,868	50,570	23,769	18,138	237,201	279,108	271,347
Ontario	28,918	22,691	51,609	48,838	22,941	14,181	208,475	245,597	228,801
Durham	22,291	18,360	40,651	40,402	24,044	11,203	157,710	192,957	185,485
Northumb'd	19,773	15,738	35,511	34,595	19,706	8,488	180,943	209,137	196,802
Prince Ed'w	8,425	7,386	15,811	14,929	5,341	2,866	94,436	102,643	100,550
Totals	168,823	139,013	307,836	295,900	142,872	82,240	1,334,730	1,559,842	1,501,417
Lennox&Ad	15,392	12,117	27,509	27,602	6,501	5,063	84,029	95,593	98,619
Frontenac	17,875	14,414	32,289	35,082	9,942	6,288	80,645	96,875	100,915
Leeds	16,459	14,263	30,722	34,876	14,464	7,837	113,583	135,884	133,011
Grenville	9,358	7,580	16,938	17,321	19,091	6,365	86,571	112,027	109,290
Dundas	7,056	6,098	13,154	14,171	13,879	5,797	100,523	120,199	122,192
Stormont	8,875	6,383	15,258	16,077	8,189	4,744	81,147	94,080	93,379
Glengarry	13,416	9,902	23,318	20,789	5,897	3,431	106,800	116,128	104,566
Prescott	10,565	8,055	18,620	19,294	10,385	3,690	75,963	90,038	90,171
Russell	9,473	7,419	16,892	16,528	11,213	3,939	49,168	64,320	65,317
Carleton	25,976	21,017	46,993	45,639	22,790	18,049	165,039	205,878	209,086
Renfrew	44,462	34,197	78,659	72,527	19,648	10,465	120,683	150,796	141,529
Lanark	34,884	28,987	63,871	63,834	11,340	8,915	115,507	135,762	152,915
Totals	213,791	170,432	384,223	383,740	153,339	84,583	1,179,658	1,417,580	1,420,990
Victoria	22,919	17,440	40,359	48,479	13,379	9,563	129,943	152,885	148,515
Peterboro'	16,602	12,913	29,515	31,810	19,134	9,617	120,293	149,044	145,096
Haliburton	5,479	3,420	8,899	8,742	1,142	816	15,710	17,668	18,727
Hastings	25,191	19,928	45,119	46,741	15,695	12,417	170,391	198,503	186,352
Totals	70,191	53,701	123,892	135,772	49,350	32,413	436,337	518,100	498,690
Muskoka	9,429	7,114	16,543	15,099	3,241	1,708	35,762	40,711	42,216
Parry So'nd	8,902	6,748	15,650	13,636	1,991	1,579	31,003	34,573	32,602
Nipissing	1,396	822	2,218	1,710	1,135	504	9,859	11,498	10,536
Algoma	12,391	9,538	21,929	20,260	3,117	2,345	37,658	43,120	41,805
Totals	32,118	24,222	56,340	50,705	9,484	6,136	114,282	129,902	127,159
The Province	1,095,995	926,740	2,022,735	2,015,805	696,604	420,022	6,636,214	7,752,840	7,552,662

LIVE STOCK SOLD.

TABLE IV. Showing by County Municipalities and groups of Counties the number of Horses, Cattle, Sheep, Hogs and Poultry sold in the Province of Ontario in the years 1894 and 1895, ending June 30th of each year.

Counties.	Horses.		Cattle.		Sheep.		Hogs.		Poultry.
	1895.	1894.	1895.	1894.	1895.	1894.	1895.	1894.	1895.
Essex	1,100	1,287	6,732	7,562	8,589	9,688	36,371	34,643	82,604
Kent	1,222	1,084	11,359	13,183	15,364	13,707	47,983	44,516	73,808
Elgin	955	1,259	11,416	12,056	21,368	19,670	50,396	42,120	78,733
Norfolk	626	885	6,085	6,449	13,319	10,958	32,373	28,805	55,756
Haldimand	680	741	5,121	5,328	11,914	10,645	20,311	17,232	49,484
Welland	524	546	4,198	4,773	10,260	9,801	12,328	10,524	54,358
Totals	5,107	5,802	44,911	49,351	80,814	74,469	199,762	177,840	394,743
Lambton	1,292	1,234	18,484	18,025	23,073	19,735	30,348	22,180	73,473
Huron	2,535	2,891	28,565	29,829	39,860	35,322	52,772	46,382	94,877
Bruce	1,768	2,014	23,681	24,472	39,599	35,665	36,041	32,213	65,180
Totals	5,595	6,049	70,730	72,326	102,532	90,722	119,161	100,775	233,530
Grey	1,972	1,991	24,372	24,490	47,317	46,433	49,603	45,766	84,441
Simcoe	2,068	1,817	15,975	16,764	33,920	29,010	50,611	45,467	93,149
Totals	4,040	3,808	40,347	41,254	81,237	75,443	100,214	91,233	177,590
Middlesex	1,862	1,967	28,591	31,028	31,067	28,609	53,286	46,384	138,500
Oxford	1,254	1,144	15,956	17,386	12,350	11,951	54,689	49,350	64,223
Brant	433	543	5,565	5,742	7,499	7,677	24,024	20,868	32,819
Perth	1,379	1,249	16,862	18,402	21,360	19,524	49,880	35,391	64,645
Wellington	1,556	1,632	20,991	20,786	28,252	29,422	60,903	54,616	72,134
Waterloo	742	769	13,267	13,916	12,428	13,232	29,705	24,813	45,793
Dufferin	821	759	6,669	7,614	10,474	8,694	18,952	18,357	37,527
Totals	8,047	8,063	107,892	114,873	133,430	119,109	282,439	250,379	455,641
Lincoln	454	547	4,366	4,215	9,300	8,658	13,953	12,566	51,959
Wentworth	662	606	6,728	6,505	12,875	10,340	22,515	20,169	55,936
Halton	379	413	4,904	5,294	8,717	6,680	17,736	14,509	38,313
Peel	1,005	814	7,658	8,039	12,958	11,142	29,213	24,446	68,513
York	1,489	1,620	11,870	13,897	20,082	17,942	52,448	48,189	98,581
Ontario	1,681	1,877	13,563	13,110	19,655	15,085	41,138	37,250	89,626
Durham	999	963	9,216	8,668	14,573	11,735	26,154	21,645	55,111
Northumberland	1,198	1,057	7,796	9,124	11,599	10,470	26,602	21,897	66,703
Prince Edward	415	389	2,676	2,658	6,342	5,260	11,282	9,729	26,702
Totals	8,282	8,277	68,477	71,520	116,092	97,312	241,041	210,391	551,444
Lennox and Add	586	473	4,935	5,771	9,874	8,346	10,689	9,632	28,257
Frontenac	482	475	4,828	5,864	13,886	11,511	8,994	8,917	46,548
Leeds	475	488	5,408	5,936	9,950	11,132	16,425	15,757	34,901
Grenville	407	317	3,194	2,952	6,129	6,081	9,527	7,367	32,542
Dundas	315	275	2,241	2,489	5,109	6,005	10,942	9,575	23,477
Stormont	388	390	2,787	2,790	4,579	4,017	6,874	5,604	17,530
Glengarry	605	605	4,225	4,415	7,184	6,205	8,765	7,190	34,115
Prescott	497	502	2,820	2,658	6,742	5,409	6,431	6,165	28,818
Russell	356	294	2,463	2,514	4,880	4,287	5,342	4,581	23,184
Carleton	874	887	8,852	9,342	16,227	14,834	18,308	15,913	70,289
Renfrew	700	739	7,812	7,904	18,130	15,532	15,514	13,527	36,962
Lanark	642	859	7,509	8,039	20,037	18,491	14,443	13,491	31,234
Totals	6,327	6,782	57,134	60,671	122,727	111,850	132,214	117,719	407,872
Victoria	751	716	6,688	7,778	11,650	14,201	19,057	18,456	35,957
Peterborough	594	543	6,366	6,665	8,295	8,115	17,057	16,254	45,191
Haliburton	128	125	1,569	1,411	1,819	2,140	2,153	2,140	4,516
Hastings	685	976	7,540	8,376	10,472	11,125	31,813	31,153	48,848
Totals	2,158	2,360	21,103	24,130	32,036	35,581	70,080	68,003	134,512
Muskoka	279	303	2,426	2,551	4,660	4,312	4,291	4,375	12,933
Parry Sound	171	185	2,059	2,226	3,195	3,153	4,128	4,015	8,998
Nipissing	107	60	497	477	559	489	1,100	1,018	3,519
Algoma	233	227	2,556	2,319	5,033	4,006	5,562	4,819	11,676
Totals	790	775	7,537	7,573	13,427	11,960	15,081	14,227	37,126
The Province	40,346	41,916	418,131	441,698	682,315	616,446	1,159,992	1,030,567	2,392,458

* The total number of poultry sold in 1894 was 2,131,222.

WOOL.

TABLE NO. V. Showing by County Municipalities and groups of Counties the clip of wool in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95; also the average number of pounds per fleece.

Counties.	1895.			1894.			Yearly average for the fourteen years 1882-95.		
	No. of fleeces.	Pounds.	Lb. per fleece.	No. of fleeces.	Pounds.	Lb. per fleece.	No. of fleeces.	Pounds.	Lb. per fleece.
Essex	16,494	92,450	5.61	15,889	90,170	5.67	14,717	83,255	5.66
Kent	23,965	143,176	5.97	23,315	136,465	5.85	20,931	120,999	5.78
Elgin	27,566	162,617	5.90	29,313	173,070	5.90	24,359	141,556	5.81
Norfolk	21,805	118,080	5.42	21,250	115,850	5.45	17,600	94,408	5.36
Haldimand	18,856	115,046	6.10	17,796	109,731	6.17	17,481	104,935	6.00
Welland	14,322	71,096	4.96	13,479	66,984	4.97	13,776	69,318	5.03
Totals	123,008	702,465	5.71	121,042	692,270	5.72	108,864	614,471	5.64
Lambton	31,276	181,973	5.82	33,395	196,132	5.87	27,073	158,866	5.87
Huron	56,975	327,328	5.75	58,269	340,608	5.85	50,952	293,051	5.75
Bruce	63,624	367,797	5.78	60,740	356,033	5.86	51,412	297,281	5.78
Totals	151,875	877,098	5.78	152,404	892,773	5.86	129,437	749,198	5.79
Grey	86,827	488,590	5.63	87,994	504,252	5.73	73,369	411,470	5.61
Simcoe	65,419	366,458	5.60	60,840	348,914	5.73	47,989	269,612	5.62
Totals	152,246	855,048	5.62	148,834	853,166	5.73	121,358	681,082	5.61
Middlesex	41,604	255,744	6.15	42,940	272,881	6.35	38,867	236,016	6.07
Oxford	14,535	85,026	5.85	15,461	91,828	5.94	18,066	104,183	5.77
Brant	12,249	69,066	5.64	11,473	67,026	5.84	13,049	75,300	5.77
Perth	30,088	172,571	5.74	31,057	182,596	5.88	31,335	180,065	5.75
Wellington	54,300	320,538	5.90	49,726	298,523	6.00	47,739	276,787	5.80
Waterloo	19,839	110,185	5.55	20,108	113,510	5.65	21,536	118,013	5.48
Dufferin	19,933	117,153	5.88	19,812	117,499	5.93	18,492	106,192	5.74
Totals	192,548	1,130,283	5.87	190,577	1,143,863	6.00	189,084	1,096,556	5.80
Lincoln	12,712	64,806	5.10	13,010	67,235	5.17	10,948	56,576	5.16
Wentworth	16,395	99,657	6.08	16,201	99,815	6.16	15,081	87,365	5.79
Halton	13,251	84,049	6.34	12,639	82,261	6.51	11,706	73,964	6.32
Peel	17,260	108,116	6.26	17,142	113,218	6.60	15,646	102,755	6.57
York	32,773	197,900	6.04	30,082	188,102	6.25	27,560	167,264	6.07
Ontario	28,657	172,054	6.00	27,486	172,076	6.26	26,929	166,619	6.19
Durham	22,845	131,249	5.75	23,138	137,343	5.94	21,538	126,754	5.89
Northumberland	19,865	116,155	5.85	19,108	111,450	5.83	20,012	115,108	5.75
Prince Edward	7,733	39,675	5.13	7,333	40,477	5 52	8,719	46 431	5.33
Totals	171,491	1,013,661	5.91	166,139	1,011,977	6.09	158,139	942,846	5.96
Lennox and Addington	14,889	77,849	5.23	14,929	79,665	5.34	14,207	75,465	5.31
Frontenac	17,809	91,890	5.16	18,790	96,414	5.13	17,922	91,116	5.08
Leeds	16,765	85,138	5.08	17,841	91,623	5.14	33,261	163,901	4.93
Grenville	9 723	49,106	5.05	9,945	51,153	5.14			
Dundas	6,844	36,373	5.31	7,385	39,483	5.35	9,416	47,830	5.08
Stormont	9,103	47,938	5.27	8,877	47,237	5.32	9,269	48,461	5.23
Glengarry	13,428	71,787	5.35	11,767	62,611	5.32	14,225	69,314	4 87
Prescott	10,885	58,413	5.37	10,777	57,417	5.33	10,614	53,708	5.06
Russell	9,368	48,072	5.13	9,288	49,889	5.37	8,116	41,040	5.06
Carleton	26,937	142,864	5.30	24,684	131,886	5.34	26,828	138,247	5.12
Renfrew	44,066	208,193	4.73	40,037	192,638	4.81	37,832	176.280	4.66
Lanark	34,899	173,015	4 96	35,307	176,894	5.01	33,888	165,498	4.88
Totals	214,656	1,090,638	5.08	209,627	1,076,910	5.14	215,578	1,070,860	4.97
Victoria	22,707	127,599	5 63	26,951	153,685	5.70	22,891	128,281	5.60
Peterborough	16,961	91,403	5.39	17,588	95,888	5.45	16.746	89,274	6.33
Haliburton	5,679	28,666	5.05	5,281	27,022	5.12	3,833	18,794	4.90
Hastings	25,429	124,624	4.90	24,966	126,764	5.08	24,635	122,540	4.97
Totals	70,776	372,292	5.26	74,786	403,359	5.39	68,105	358,889	5.28
Muskoka	9,670	47,191	4.88	8,746	43,485	4.97	6,678	34,905	5.23
Parry Sound	9,074	49,652	5.47	8,026	44,972	5.60	4,006	22.666	5.66
Nipissing	1,430	6,776	4.74	1,042	5,120	4.91	331	1,625	4.91
Algoma	12,366	69,707	5 64	11,244	67,141	5.97	5,741	34,239	5.96
Totals	32,540	173,326	5.33	29,058	160,718	5.53	16,756	93,435	5.58
The Province	1,109,140	6,214,811	5 60	1,092,467	6,235,036	5.71	1,007,321	5,607,337	5.57

BEES.

TABLE VI. Showing by County Municipalities and groups of Counties the number and value per Hive of Bees kept in said Municipalities for the years 1893, 1894 and 1895.

Counties.	1895.			1894.			1893.		
	No. of hives.	Value of bees and outfit.	Value per hive.	No. of hives.	Value of bees and outfit.	Value per hive.	No. of hives.	Value of bees and outfit.	Value per hive.
		$	$ c.		$	$ c.		$	$ c.
Essex	4,492	21,647	4 82	5,452	24,370	4 47	4,885	24,865	5 09
Kent	3,788	21,195	5 64	4,760	22,943	4 82	4,110	23,920	5 82
Elgin	4,117	21,697	5 27	4,813	24,498	5 09	5,907	31,425	5 32
Norfolk	6,943	40,200	5 79	6,348	33,547	5 28	4,303	22,505	5 23
Haldimand	3,549	20,868	5 88	6,123	34,166	5 58	7,390	41,015	5 55
Welland	4,406	22,779	5 17	8,523	39,632	4 65	11,221	58,125	5 18
Totals	27,294	148,386	5 44	36,019	179,126	4 97	37,816	201,855	5 34
Lambton	5,404	27,290	5 05	7,854	38,092	4 85	9,203	64,065	6 96
Huron	7,892	49,246	6 24	9,263	57,523	6 21	9,004	61,948	6 88
Bruce	5,072	28,454	5 61	8,042	44,070	5 48	9,579	60,252	6 29
Totals	18,368	104,990	5 72	25,159	139,685	5 55	27,786	186,265	6 70
Grey	7,094	35,115	4 95	9,497	50,524	5 32	9,592	50,262	5 24
Simcoe	4,614	25,515	5 53	5,147	28,051	5 45	4,427	22,401	5 06
Totals	11,708	60,630	5 18	14,644	78,575	5 37	14,019	72,663	5 18
Middlesex	9,103	55,346	6 08	12,401	69,322	5 59	13,789	83,699	6 07
Oxford	2,263	15,683	6 93	3,661	23,797	6 50	4,805	44,783	9 32
Brant	2,299	13,104	5 70	3,437	20,003	5 82	3,632	21,429	5 90
Perth	3,213	16,740	5 21	3,435	20,850	6 07	4,090	25,072	6 13
Wellington	2,827	16,623	5 88	3,250	18,623	5 73	2,359	17,103	7 25
Waterloo	1,215	7,764	6 39	1,157	6,734	5 82	1,234	8,490	6 88
Dufferin	2,705	15 229	5 63	1,805	8,249	4 57	1,335	8,637	6 47
Totals	23,625	140,489	5 95	29,146	167,578	5 75	31,244	209,213	6 70
Lincoln	1,308	6,213	4 75	1,987	9,657	4 86	2,828	11,538	4 08
Wentworth	2,896	17,734	6 32	4,188	22,657	5 41	4,658	37,031	7 95
Halton	1,630	10,514	6 45	1,481	8,538	5 90	1,250	6,263	5 01
Peel	4,000	21,560	5 59	4,904	25,452	5 19	4,483	25,643	5 72
York	4,602	30,143	6 55	4,473	26,927	6 02	3,733	22,323	5 98
Ontario	4,396	24,354	5 54	4,445	24,314	5 47	3,600	28,912	8 02
Durham	3,710	24,368	5 49	4,747	24,375	4 92	5,076	29 527	5 84
Northumberland	10,070	47,732	4 74	9,572	47,286	4 94	8,785	44,276	5 04
Prince Edward	3,501	19,885	5 68	3,747	19,597	5 23	4,196	16,952	4 04
Totals	36,023	198,504	5 51	39,544	207,984	5 26	38,594	222,465	5 76
Lennox and Addington	2,881	15,509	5 39	2,606	14,985	5 75	2,611	13,656	5 23
Frontenac	1,341	7,848	5 89	1,540	8,362	5 43	1,829	11,267	6 16
Leeds	7,532	38,187	5 07	6,694	35,010	5 23	7,249	32,041	4 42
Grenville	1,868	8,014	4 29	1,639	7,408	4 52			
Dundas	2,965	14,934	5 04	3,654	15,832	4 33	4 273	23,886	5 59
Stormont	2,247	10,269	4 57	2,110	9,664	4 58	1,672	7,524	4 50
Glengarry	3,051	18,466	4 57	3,929	17,720	4 51	5,190	12,284	2 84
Prescott	5,035	25,820	5 12	5,752	27,784	4 83	4,687	26,247	5 60
Russell	1,660	7,244	4 36	1,656	8,714	4 41	2,783	9,198	3 28
Carleton	6,702	35,118	5 24	6,400	31,848	4 97	5,445	30,655	5 63
Renfrew	3,196	14,469	4 53	2,541	11,676	4 65	2,739	12,408	4 53
Lanark	4,507	23,660	4 69	7,122	37,916	5 11	9,884	41,899	4 23
Totals	43,889	217,698	4 95	45,251	226,867	4 91	46,382	220,952	4 76
Victoria	3,450	16,794	4 86	1,193	5,966	5 00	642	4,173	6 50
Peterborough	1,310	8,070	6 16	1,633	9,586	5 87	1,570	11,241	7 16
Haliburton	109	591	5 42	60	330	5 84	62	310	5 00
Hastings	6,139	35,422	5 77	5,208	28,956	5 56	5,887	26,845	4 56
Totals	11,013	60,884	5 53	8,094	44,857	5 54	8,161	42,569	5 22
Muskoka	663	4,303	6 49	586	3,586	6 12	421	2,564	6 09
Parry Sound	160	1,070	6 69	63	312	5 00	12	60	5 00
Nipissing	17	85	5 00	14	70	5 00			
Algoma	452	2,219	4 91	604	2,935	4 86	733	4,339	5 92
Totals	1,292	7,677	5 94	1,267	6,903	5 49	1,166	6,963	5 97
The Province	173,173	985,658	5 42	200,694	1,051,574	5 26	205,168	1,162,945	5 67

*FACTORY CHEESE.

TABLE VII. Showing by County Municipalities and groups of Counties the quantity and value of Cheese made at 721 factories in Ontario in 1895, the amount paid to patrons and the total number of factories reported in operation.

Counties.	Factories in operation.	Factories making returns.	Quantity of Milk used.	Quantity of Cheese made.	Gross value of cheese.	No. of patrons.	Milk required to make 1 lb. cheese.	Value of cheese per 100 lb.	Total amount paid to patrons.	Paid to patrons per 100 lb. of milk.
	No.	No.	lb.	lb.	$		lb.	$ c.	$	cts.
Essex	10	8	4,943,448	448,503	32,701	634	11 02	7 29	23,044	46.6
Kent	11	5	3,282,995	298,303	22,722	270	11 01	7 62	17,440	53.1
Elgin	25	18	23,780,298	2,151,740	167,627	1,388	11 05	7 79	135,657	57.0
Norfolk	22	15	15,428,144	1,413,497	108,955	1,241	10 91	7 71	82,013	53.2
Haldimand	11	10	10,474,504	957,147	76,357	962	10 94	7 98	58,754	56.1
Welland	3	2	1,920,191	173,333	14,041	204	11 08	8 10	10,318	53.7
Totals	82	58	59,829,580	5,442,523	422,403	4,699	10 99	7 76	327,226	54.7
Lambton	17	13	9,334,171	840 076	65,407	937	11 11	7 79	46,468	49.8
Huron	19	16	16,610,737	1,510,205	126,478	1,502	11 00	8 37	98,237	59.1
Bruce	27	24	22,988,016	2,094,935	166,546	2,134	10 97	7 95	126,694	55.1
Totals	63	53	48,932,924	4,445,216	358,431	4,573	11 01	8 06	271,399	55.5
Grey	17	13	7,371,287	672,646	53,453	939	10 96	7 95	39,123	53.1
Simcoe	20	15	5,938,994	540,882	41,300	710	10 98	7 64	27,828	46.9
Totals	37	28	13,310,281	1,213,528	94,753	1,649	10 97	7 81	66,951	50.3
Middlesex	37	25	33,008,164	2,968,344	235,164	1,770	11 12	7 92	186,976	56.6
Oxford	45	32	68,571,995	6,253,896	493,397	2,566	10 96	7 89	409,168	59.7
Brant	9	4	5,394,722	488,915	38,633	301	11 03	7 90	29,784	55.2
Perth	28	21	32,579,254	2,944,147	238,535	1,884	11 07	8 10	192,098	59.0
Wellington	15	11	12,729,723	1,147,262	92,102	1,035	11 10	8 03	70,805	55.6
Waterloo	9	7	4,884,850	449,188	35,350	535	10 87	7 87	26,650	54.6
Dufferin	7	6	5,203,208	476,614	36,567	505	10 92	7 67	25,900	49.8
Totals	150	106	162,371,916	14,728,366	1,169,748	8,596	11 02	7 94	941,381	58.0
Lincoln	4	3	3,447.911	312,997	24,855	343	11 02	7 94	18,284	53.0
Wentworth	7	5	4,874,695	435,230	33,627	425	11 20	7 73	24,056	49.3
Halton	2	1	422,000	40,000	3,000	60	10 55	7 50	2,380	56.4
Peel	5	5	2.546,779	240,172	19,040	226	10 60	7 93	14,111	55.4
York	8	8	4,824,739	442,682	35,125	410	10 90	7 93	26,335	54.6
Ontario	7	5	3,881,430	352,734	27,398	359	11 00	7 77	19,055	49.1
Durham	13	9	7,951,749	715,631	56,710	698	11 11	7 92	39,918	50.2
Northumberland	37	23	30,985.240	2,819,717	218,636	1,607	10 99	7 75	175,415	56.6
Prince Edward	22	13	14 779,579	1,385,934	106,887	981	10 66	7 71	81,228	55.0
Totals	105	72	73,714,122	6,745,097	525,278	5,109	10 93	7 79	400,782	54.4
Lennox & Addingt'n	30	22	32,032,967	3,076,104	244,261	1,729	10 41	7 94	190,756	59.6
Frontenac	57	29	19.992.714	1,899,905	149,440	977	10 52	7 87	123,230	61.1
Leeds	81	33	36 689.163	3,418,695	271,272	1,201	10 73	7 93	229,580	62.6
Grenville	41	24	27,010,647	2 542,606	201,403	1,104	10 62	7 92	169,701	62.8
Dundas	47	27	24,866,509	2,370,216	189.111	905	10 49	7 98	160,858	64.7
Stormont	40	26	23,112,754	2,199,128	169,855	1,101	10 51	7 72	143,166	61.9
Glengarry	53	29	19,881,087	1,868 649	146,674	1,003	10 64	7 85	124,736	62.7
Prescott	68	22	14,252,247	1,389,494	105,602	726	10 26	7 59	86,356	60.6
Russell	37	12	8.435 337	827,026	64,589	440	10 20	7 81	54,841	65.0
Carleton	55	39	34.743,280	3,301,070	260,878	1,604	10 52	7 90	214 029	61.6
Renfrew	21	13	9,834,511	920.604	70,463	787	10 68	7 65	51,338	52.2
Lanark	42	29	34,263,851	3,222,103	258,245	1,704	10 63	8 01	204,553	59.7
Totals	572	305	285,095,067	27,035,600	2,131,693	13,281	10 55	7 88	1,753,144	61.1
Victoria	16	8	4,893,400	455,115	35,616	392	10 75	7 83	25,990	53.1
Peterborough	33	28	26,195,777	2,384,098	187,054	1,361	10 96	7 85	147,867	56.6
Haliburton	7	4	1,508,555	145,659	11,338	74	10 36	7 78	8,531	56.6
Hastings	94	55	56,710,258	5,366,647	420,473	2,461	10 57	7 83	350,078	61.7
Totals	150	95	89,237,990	8,351,519	654,481	4,288	10 69	7 84	532,466	59.7
Muskoka	2	2	367,617	36,305	2,798	57	10 13	7 71	1,950	53.0
Parry Sound	3	2	291,811	27,811	2,328	31	10 49	8 37	1,280	43.9
Totals	5	4	659,428	64,116	5,126	88	10 28	7 99	3,230	49.0
The Province	1,164	721	733,151,308	68,025,965	5,361,913	42,283	10 78	7 88	4,296,579	58.6

* The statistics in this table are for factories making returns only. The total amount of cheese made at 1,164 factories is estimated at 109,230,240 lb , and the amount paid to patrons at $6,922,962. (See page 79.)

PART III.

VALUES, RENTS AND FARM WAGES.

VALUES OF FARM PROPERTY.

The following table gives the values of farm lands, buildings, implements and live stock by county groups for 1894 and 1895, and for the Province for each of the thirteen years 1883-1895:

Districts.		Farm land.	Buildings.	Implements.	Live stock.	Total farm property.
		$	$	$	$	$
Lake Erie	1895	82,705,888	27,737,748	7,166,730	12,559,651	130,170,017
	1894	84,973,369	27,724,505	7,142,076	13,489,680	133,329,630
Lake Huron	1895	65,086,947	21,173,775	5,478,207	12,495,338	104,234,267
	1894	66,687,263	21,128,984	5,569,007	13,513,497	106,898,751
Georgian Bay	1895	44,115,508	15,640,459	4,494,196	9,313,169	73,563,332
	1894	45,536,417	15,714,652	4,510,753	10,197,899	75,959,721
West Midland	1895	121,390,386	44,277,813	10,199,962	22,244,416	198,112,577
	1894	124,512,040	43,964,082	10,405,475	23,729,369	202,610,966
Lake Ontario	1895	120,502,380	45,409,418	10,065,062	18,950,369	194,927,229
	1894	124,257,277	45,619,495	10,327,644	20,785,995	200,990,411
St. Lawrence and Ottawa	1895	97,495,749	35,988,390	9,622,379	19,768,061	162,874,579
	1894	99,128,799	35,913,049	9,655,240	20,543,246	165,240,334
East Midland	1895	34,936,540	11,897,685	3,190,672	6,681,324	56,706,221
	1894	35,668,091	12,058,550	3,224,764	7,373,427	58,324,832
Northern District	1895	6,705,074	2,023,382	727,177	1,945,719	11,401,352
	1894	6,482,861	1,948,249	695,213	1,914,539	11,040,862
The Province	1895	572,938,472	204,148,670	50,944,385	103,958,047	931,989,574
	1894	587,246,117	204,071,566	51,530,172	111,547,652	954,395,507
	1893	602,664,361	200,189,888	51,435,919	116,070,902	970,361,070
	1892	615,828,471	195,644,258	51,003,020	117,501,495	979,977,244
	1891	621,245,223	191,268,327	50,651,442	108,721,076	971,886,068
	1890	622,886,060	193,438,826	50,515,583	104,086,626	970,927,035
	1889	632,329,433	192,464,237	51,685,706	105,781,288	982,210,664
	1888	640,480,801	188,293,226	49,754,832	102,839,235	981,368,094
	1887	636,883,755	184,753,507	49,248,297	104,406,655	975,292,214
	1886	648,009,828	183,748,212	50,530,936	107,208,935	989,497,911
	1885	626,422,024	182,477,005	48,369,725	100,890,086	958,159,740
	1884	625,478,706	175,386,925	47,830,710	103,166,829	949,863,170
	1883	654,793,425	163,030,675	43,522,530	100,082,365	961,428,595

Farm land again shows a decreased value for the Province, the reduction in 1895 reaching $14,307,645, while the figures have dropped $81,854,553 since 1883. The

Northern Districts alone show an increase. There is little variation in the value of farm buildings, but implements and live stock show a considerable slump.

VALUE PER ACRE OCCUPIED. The value per acre occupied of the various classes of farm property is given in the following table, by county groups and for the Province, for the years 1894 and 1895:

Districts.	Farm lands.		Buildings.		Implements.		Live stock.		Total farm property.	
	1895.	1894.	1895.	1894.	1895.	1894.	1895.	1894.	1895.	1894.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Lake Erie	35 40	36 39	11 87	11 87	3 07	3 06	5 38	5 78	55 72	57 10
Lake Huron	28 15	28 94	9 16	9 17	2 37	2 41	5 40	5 86	45 08	46 38
Georgian Bay	21 74	22 49	7 71	7 76	2 21	2 23	4 59	5 03	36 25	37 51
West Midland	37 31	38 25	13 61	13 51	3 13	3 19	6 84	7 29	60 89	62 24
Lake Ontario	39 53	40 75	14 90	14 96	3 30	3 39	6 22	6 82	63 95	65 92
St. Lawrence and Ottawa	18 28	18 59	6 75	6 74	1 80	1 81	3 71	3 85	30 54	30 99
East Midland	12 96	13 22	4 41	4 47	1 18	1 19	2 48	2 73	21 03	21 61
Northern Districts	3 19	3 17	96	95	35	34	92	94	5 42	5 40
The Province	24 79	25 49	8 83	8 86	2 20	2 23	4 50	4 84	40 32	41 42

There is an average reduction of 70 cents per acre for each acre of farm land assessed in the Province, 3 cents on the farm buildings, 3 cents on implements and 34 cents for live stock.

The following table gives a still better basis of comparison, as the values are here given per acre cleared or in use, by county groups and for the Province:

Farm property.	Lake Erie.	Lake Huron.	Georgian Bay.	West Midland.	Lake Ontario.	St. Lawrence and Ottawa.	East Midland.	Northern Districts.	The Province.			
									1895.	1894.	1883.	1883-95.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Buildings	18 09	14 71	13 61	18 33	19 22	14 81	13 26	10 22	16 43	16 60	15 00	16 46
Implements	4 67	3 80	3 91	4 22	4 26	3 96	3 55	3 67	4 10	4 19	4 13	4 33
Live stock	8 19	8 68	8 10	9 21	8 02	8 13	7 44	9 83	8 36	9 07	9 50	9 28
Total	30 95	27 19	25 62	31 76	31 50	26 90	24 25	23 72	28 89	29 86	28 63	30 07

The figures in this table do not show such wide ranges as in the preceding table for farm property other than the land. The Lake Ontario group averages the best buildings per acre cleared, but the West Midland stands first when implements and live stock are counted in. For the three items the average of the Province is only 26 cents in excess of the average for 1883, for although the aggregate value of buildings, implements and live stock has increased by $52,415,532 since 1883, the cleared land has advanced from 10,539,557 acres in 1883 to 12,426,992 acres in 1895.

Rentals of Leased Farms. The average value and rental of such leased farms as were reported on farmers' schedules returned to this Bureau in 1895 are shown by districts in the following table :

Leased farms.	Lake Erie.	Lake Huron.	Georgian Bay.	West Midland.	Lake Ontario.	St. Lawrence and Ottawa.	East Midland.	Northern Districts.	The Province.
	$	$	$	$	$	$	$	$	$
Average value—									
Land	3,723	3,697	3,034	4,724	4,709	3,323	3,514	1,150	3,844
Buildings	1,339	1,326	1,194	1,788	1,766	1,369	1,361	577	1,460
Average rental	227	222	190	289	292	198	213	92	236
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Rent per acre based on—									
Acres occupied 1895	2 26	1 89	1 53	2 32	2 50	1 43	1 34	46	1 87
Acres occupied 1894	2 19	1 82	1 55	2 17	2 48	1 44	1 36	42	1 88
Acres occupied 1886-95	2 18	1 92	1 57	2 31	2 62	1 36	1 44	44	1 98
Acres cleared 1895	2 84	2 46	2 09	2 88	3 05	2 15	2 09	1 73	2 59
Acres cleared 1894	2 90	2 48	2 17	2 79	3 07	2 31	2 11	1 64	2 65
Acres cleared 1886-95	2 93	2 58	2 21	2 97	3 21	2 16	2 34	1 75	2 76
Per cent. ratio of rental to value of farm 1895	4 48	4 43	4 50	4 44	4 51	4 22	4 38	5 31	4 45
Per cent. ratio of rental to value of farm 1894	4 54	4 30	4 67	4 22	4 88	4 08	4 95	5 20	4 49
Per cent. ratio of rental to value of farm 1886-95	4 16	4 26	4 34	4 25	4 47	3 91	4 57	5 01	4 29

The rent per acre occupied has decreased by one cent, and by six cents per acre cleared. The per cent. ratio of the rental to the value of the farm land and buildings is 4.45, or .04 less than in the preceding year, although .16 more than the average for the ten years 1886-95. In this connection it is well to remember that, owing to leases, rentals are not likely to fall as rapidly as values may decline.

VALUES OF LIVE STOCK.

Value of Horses. The following table gives the value of each of the four classes of farm horses by county groups and for the Province, together with their total value for 1894 and 1895 ; also the value of all classes of horses sold in the year :

Districts.	Working horses.	Breeding mares.	Colts.	Sales.	Total on hand.	Total sold in year.
	$	$	$	$	$	$
Lake Erie	3,908,601	585,641	963,609	121,377	5,979,278	345,748
Lake Huron	3,045,020	616,171	742,251	81,126	4,484,568	366,646
Georgian Bay	2,510,288	458,614	544,963	60,852	3,574,707	260,640
West Midland	5,109,886	1,022,[illegible]83	1,401,347	204,[illegible]23	8,048,838	508,242
Lake Ontario	5,796,214	990,760	1,391,847	210,129	8,388,950	558,402
St. Lawrence and Ottawa	4,983,037	784,410	953,039	127,657	6,848,143	392,693
East Midland	1,882,664	278,091	593,326	49,739	2,803,820	127,267
Northern Districts	507,126	147,886	88,307	22,181	765,500	50,654
Totals 1895	28,042,835	4,884,456	6,478,679	877,784	40,283,754	2,616,391
Totals 1894	29,086,363	6,781,000	8,[illegible]6,281	1,381,961	46,245,614	3,222,500

The value of all horses on hand has gone down from $46,245,614 in 1894 to $40,283,754, and every class has shared in the decline, although, relatively, the value of working horses has suffered least. Sales of horses this year amounted to only $2,616,391, or $606,109 less than those of 1894.

VALUE OF CATTLE. The following table gives the values of the various classes of cattle, their total values in 1894 and 1895, and the value of cattle sold during 1895, by county groups and for the Province :

Districts.	Working oxen.	Milch cows.	Store cattle.	Other cattle.	Total on hand.	Total sold in year.
	$	$	$	$	$	$
Lake Erie	16,217	2,592,626	936,791	1,065,121	4,610,755	1,324,779
Lake Huron	25,092	2,454,409	1,947,724	1,575,677	6,002,902	2,475,233
Georgian Bay	28,170	1,887,661	970,911	1,042,146	3,928,888	1,172,279
West Midland	11,530	5,736,917	2,419,565	2,570,868	10,738,880	3,982,556
Lake Ontario	14,568	4,499,476	1,239,072	1,808,704	7,561,820	2,235,791
St. Lawrence and Ottawa	26,272	6,938,125	1,159,325	1,882,250	10 005,972	1,883,768
East Midland	24,515	1,908,128	453,531	659,567	3,045,741	515,166
Northern Districts	44,690	399,397	145,323	223,649	813,059	182,525
Totals. (1895	191,054	26,416,739	9,272,242	10,827,982	46,708,017	13,272,127
Totals. (1894	226,127	25,863,069	10,031,007	11,407,384	47,577,587	15,219,256

The value of cattle on hand in the Province is $46,708,017, a decrease of $869,570 compared with the preceding year, although there has been an increase in the value of milch cows. The total value of cattle disposed of during the year is $13,272,127, or $1,947,129 less than in 1894 Considerably over one-fourth the sales of cattle were made in the West Midland group, where the greatest number of store cattle are fed ; while the St. Lawrence and Ottawa district, which has the highest value in milch cows, and which has nearly as great value for all classes of cattle on hand as the West Midland, stands fourth in the total value of sales during the year.

SHEEP AND HOGS. The table following gives the values of all classes of sheep and swine on hand and sold in 1895, by county groups and for the Province ; also the figures for the Province for 1894 :

Districts.	Sheep.				Hogs.			
	Over one year.	Under one year.	Total on hand.	Total sold in year.	Over one year.	Under one year.	Total on hand.	Total sold in year.
	$	$	$	$	$	$	$	$
Lake Erie	533,927	296,361	830,201	299,272	481,569	777,439	1,259,008	1,757,612
Lake Huron	729,544	420,086	1,149,630	375,194	243,496	397,404	640,900	978,254
Georgian Bay	675,457	322,288	997,745	276,687	252,467	386,448	638,915	833,519
West Midland	984,219	558,586	1,542,805	542,983	527,988	969,642	1,497,630	2,326,958
Lake Ontario	836,878	404,009	1,240,887	444,143	504,746	800,112	1,304,858	1,996,856
St. L. & Ottawa	864,517	443,632	1,308,149	390 848	604,758	579,379	1,184,137	1,435,263
East Midland	290,921	131,912	422,833	105,891	227,503	235,729	463,223	607,001
Northern Dists	152,181	63,921	216,102	49,594	56,499	56,041	112,540	132,204
Totals (1895	5,067,644	2,640,798	7,708 442	2,484,612	2,899,026	4,202,185	7,101,211	10,067,667
Totals (1894	5,580,936	3,025,735	8,606,671	2,552,267	2,981,218	3,928,044	6,909, 62	10,158,978

The total value of sheep on hand is $7,708,442, which is less by $898,229 than in 1894, both classes sharing in the decrease. The value of sheep sold was $2,484,612, or $67,655 below the figures for the preceding year. There is a decrease in the value of hogs over one year, and a more decided increase in the value of hogs under one year, while the value of all classes of swine is $7,101,211, or $191,949 better than in 1894. The value of swine sold, $10,067,667, is, however, $91,311 less than in the year before.

VALUE OF POULTRY AND TOTAL LIVE STOCK: The value of poultry by classes, and also the total value of live stock on hand and sold during the year, is given in the following table by county groups and for the Province:

Districts.	Poultry.					Total value of live stock on hand.	Total value of live stock sold in year.
	Turkeys.	Geese.	Other fowls.	Total on hand.	Total sold in year.		
	$	$	$	$	$	$	$
Lake Erie	50,615	23,072	206,682	280,369	127,057	12,559,651	3,854,468
Lake Huron	44,411	26,429	146,498	217,338	79,224	12,495,338	4,274,580
Georgian Bay	28,646	23,989	120,279	172,914	60,555	9,313,169	2,609,680
West Midland	93,690	42,941	289,632	426,263	173,097	22,244,416	7,533,836
Lake Ontario	98,016	49,429	306,409	453,854	207,568	18,950,369	5,442,860
St. Lawrence & Ottawa	101,671	49,047	270,942	421,660	151,974	19,768,061	3,754,546
East Midland	31,971	17,495	96,241	145,707	48,355	6,681,324	1,403,680
Northern Districts	6,945	4,131	27,442	38,518	12,504	1,945,719	427,481
Totals 1885.	455,965	236,533	1,464,125	2,156,623	860,334	103,958,047	29,301,131
Totals 1894.	461,876	250,324	1,496,318	2,208,518	782,588	111,547,652	31,935,589

The total value of poultry in the Province is placed at $2,156,623, which is a decrease of $51,895, the falling off occurring in all classes. The value of fowl sold during the year, however, amounted to $860,334, an improvement of $77,746 over last year's figures. The total value of live stock on hand is estimated at $103,958,047, or $7,589,605 less than that of a year ago; while the value of all live stock sold during the year is given as $29,301,131, a decrease of $2,634,458 compared with the figures for 1894

VALUES OF LIVE STOCK PER HEAD. The table following gives the value of the various classes of live stock per head on hand on July 1, 1894 and 1895:

Farm live stock.	Lake Erie.	Lake Huron.	Georgian Bay.	West Midland.	Lake Ontario.	St. Lawrence and Ottawa.	East Midland.	Northern Districts.	The Province. 1895.	The Province. 1894.
Horses:	$	$	$	$	$	$	$	$	$	$
Working horses	67	69	67	64	66	64	66	83	66	74
Breeding mares	67	70	68	67	69	67	59	86	68	76
Colts	45	44	43	44	45	41	41	42	44	48
Stallions	258	278	342	336	257	213	199	229	265	328
Cattle:										
Working oxen	42	56	45	44	55	40	38	46	45	46
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Milch cows	29 43	30 75	29 03	33 56	32 23	27 13	25 56	28 00	29 74	31 02
Store cattle	25 45	29 09	22 74	28 37	24 86	21 32	19 84	21 25	25 36	26 75
Other cattle	11 90	12 71	11 02	13 62	13 21	10 95	10 23	10 24	12 14	12 91
Sheep:										
Over one year	4 38	4 89	4 51	5 17	4 96	4 04	4 14	4 74	4 62	5 14
Under one year	2 76	2 95	2 73	3 25	2 91	2 60	2 46	2 64	2 85	3 26
Hogs:										
Over one year	10 72	11 88	11 46	12 53	13 09	11 96	11 25	11 37	11 87	13 08
Under one year	3 88	3 96	4 08	4 14	3 93	4 05	3 68	3 71	3 98	4 30
Poultry:	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.
Turkeys	60	62	63	66	69	66	65	73	65	67
Geese	54	51	55	56	60	58	54	67	56	57
Other fowls	21	20	22	22	23	23	22	24	22	23

The following shows the values per head of the various classes of farm live stock sold in the years ending June 30, 1894 and 1895 :

Farm live stock.		Lake Erie.	Lake Huron.	Georgian Bay.	West Midland.	Lake Ontario.	St Lawrence and Ottawa.	East Midland.	Northern Districts.	The Province.	
										1895.	1894.
Horses :		$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Horses sold in year....	1895..	68 00	66 00	66 00	63 00	67 00	62 00	59 00	64 00	65 00	....
	1894..	77 00	78 00	82 00	75 00	83 00	71 00	71 00	73 00	.....	77 00
Cattle :											
Sold or killed in year ..	1895.	29 50	35 00	29 05	36 91	32 65	24 22	24 41	24 22	31 74	....
	1894..	30 27	38 03	33 25	40 29	36 06	26 27	25 35	25 23	.....	34 46
Sheep :											
Sold or killed in year ..	1895..	3 70	3 66	3 41	4 07	3 83	3 18	3 30	3 69	3 64	.....
	1894..	4 13	4 40	4 02	4 65	4 42	3 46	3 51	3 91	.....	4 14
Hogs :											
Sold or killed in year ..	1895..	8 80	8 21	8 32	8 24	8 28	10 86	8 66	8 77	8 68	.....
	1894..	9 85	9 87	9 30	9 54	9 47	11 76	9 74	9 57	.....	9 86
Poultry :		cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.
Sold or killed in year ..	1895..	32	34	34	38	38	37	36	34	36	.....
	1894..	34	35	35	37	39	37	38	39	.....	37

Each of the four classes of horses has declined in value per head, and the average price paid for horses sold during the year was only $65, or $12 less than in the year before. There was a similar experience in the case of cattle, and the average price per head sold was $31.74, compared with $34.46 in 1894. Sheep have also declined in value in both classes, the figures being $3.64 per head as against $4.14 in 1894. In every class of hogs a lowering in value was also witnessed, the average price per head having fallen from $9.86 to $8.68. In poultry, too, a general decrease is seen in all classes, and the average price paid for fowls was 36 cents compared with 37 cents in the previous year.

VALUES OF CROPS.

Market Prices. The following table is made up from reports from thirty fairly-distributed market points, and the figures are taken for the period when each of the various articles of farm produce named in the table is marketed. The average prices for the fourteen years 1882-95 are also given :

Markets.	Fall wheat, per bush.	Spring wheat, per bush.	Barley, per bush.	Oats, per bush.	Rye, per bush.	Peas, per bush.	Corn (in ear) per bush.	Buckwheat, per bush.	Beans, per bush.	Potatoes, per bush.	Hay, per ton.	Wool, per lb.
1895.....	69.3	69.8	40.4	29 1	45.6	54.8	22.6	36.8	94.7	20 2	12.30	20 0
1894.....	55.0	55.5	40.5	30.8	44.2	53.6	26.1	39.2	110.4	35.4	7 56	16 9
1893.....	59.9	59.4	40.1	33.2	47.5	54.0	26.5	41.8	118.0	39.5	7.64	18.2
1892.....	70.7	67.8	41.3	30.8	55.8	59.0	26.3	42.2	98.8	50.4	8.20	18.2
1891.....	95.1	92.9	49.1	36 5	72.3	63 8	31.1	44.1	106.1	32.6	11.91	19.4
1890.....	94.2	91.3	50.2	41.1	52.7	60.3	30.5	43.0	128.5	44.3	7 95	20.5
1889.....	88.4	88 1	44.0	30 5	50 9	55 7	25.9	39.5	126.7	45.5	9 98	20.7
1888.....	102 4	99 3	60.1	40.5	60.2	65 4	29.3	49.3	113.7	31.7	16.71	20.4
1887.....	78.4	78.0	56.7	34.6	49 5	55.9	28.9	45 0	97.9	62.8	11.62	22.1
1886.....	73.6	72.5	51 3	32.0	52 2	52.6	27.6	33.7	83 7	44.9	9 69	19.1
1885.....	81.5	80 6	55.2	31.5	55.2	58.0	27.9	39 2	80 0	41.1	9 85	17.4
1884.....	80.5	81 4	53.6	33.1	59.7	64.4	45.0	40.0	118 0	40.0	9 56	17 8
1883.....	105.0	107.0	57.0	38.0	62.0	71.0	..	.....		62.0	9 02	16 9
1882.....	101.0	106 0	65.0	43.0	64.0	74.0	40.0	40.0	197.0	64.0	11 54	16.9
1882-95....	82 8	85.1	51.9	34.3	57.0	59.8	30.2	40.8	110.7	41.5	9.71	18.7

Hay is the only field crop exceeding its own average price for the fourteen years, although it fails to equal the remarkable figures of 1888, and wool also commands a higher price than its average for 1882-95. The extremely low figure for potatoes is striking. Oats and corn (in the ear) are the other crops falling below their respective prices in every other year comprising the table.

VALUE OF CROPS. The following table presents the value of each crop, based upon market prices, acreage and yield, for each of the five years 1891-95, together with the average for the fourteen years 1882-95 :

Crops.	1895.	1894.	1893.	1892.	1891.	Average 1882-95.
	$	$	$	$	$	$
Fall wheat	9,809,610	9,081,658	10,509,604	14,488,195	20,800,736	14,742,708
Spring wheat...	2,423,835	1,869,159	2,486,521	5,620,888	9,951,019	6,570,962
Barley.	4,884,565	4,447,064	3,932,241	5,069,293	7,925,675	8,843,148
Oats.	24,646,992	21,613,135	19,450,064	19,945,480	27,378,483	21,130,757
Rye	866,453	612,880	472,516	631,937	820,337	906,026
Peas.	8,531,320	7,516,268	7,651,236	8,551,714	11,690,367	8,427,539
Corn (Husking.	5,609,297	4,247,867	3,729,335	2,953,358	5,687,773	4,516,692
Corn (Silo.	3,551,308	2,099,530	2,079,048	1,897,814		
Buckwheat ...	1,027,364	993,459	995,031	1,063,952	1,150,191	710,323
Beans	1,414,988	913,575	783,886	529,500	816,546	649,487
Potatoes.	5,936,959	6,075,748	5,099,929	6,194,068	7,842,219	7,719,168
Mangel-wurzels.	1,276,920	922,570	686,605	828,038	942,356	753,186
Carrots	572,672	464,518	371,431	478,420	476,752	461,516
Turnips	6,349,670	6,169,449	5,697,535	6,354,164	6,885,345	4,825,150
Hay.	22,753,942	27,028,512	37,921,575	35,955,672	28,498,224	31,751,725
Totals .	99,655,895	94,055,392	101,886,557	110,562,493	130,866,023	112,008,387

The total value of field crops comprising the table amounts to $99,655,895, which, though greater than that of the preceeding year, falls below the average of the fourteen years. Potatoes and hay are the only crops showing lower total values than in 1894, and oats, peas, corn, buckwheat, beans, mangel wurzels, carrots and turnips also exceed their respective average values for the 1882-95 term.

CROP VALUES BY COUNTY GROUPS. The value of field crops is given in the following table by county groups and for the Province for the past five years, together with the average for the fourteen years, 1882-95 :

Districts.	1895.	1894.	1893.	1892.	1891.	1882-95.
	$	$	$	$	$	$
Lake Erie	13,409,752	12,013,990	13,268,186	13,040,993	17,117,703	14,282,615
Lake Huron	10,713,179	10,128,930	10,995,090	12,478,818	14,368,299	11,966,856
Georgian Bay.	9,186,104	8,836,448	9,197,514	10,163,189	11,543,525	9,947,960
West Midland	20,567,204	19,053,430	21,542,674	23,247,513	29,051,089	23,716,608
Lake Ontario	18,866,763	19,105,548	20,536,270	23,503,908	27,355,782	23,756,593
St. Lawrence and Ottawa.	19,317,779	16,649,877	17,893,991	18,988,107	21,893,436	19,555,631
East Midland.	6,015,770	6,093,892	6,659 759	7,115,519	7,883,091	7,312,474
Northern Districts	1,579,254	1,573,277	1,793,073	2,024,446	1,652,698	1,469,650
The Province. .	99,655,895	94,055,392	101,886,557	110,562,493	130,866,023	112,008,387

The Lake Ontario and East Midland groups are the only districts failing to equal their own figures of the preceding year, and none but the Northern Districts come up to their averages for the fourteen years. The West Midland District still leads in the value of field crops, the Lake Ontario counties coming next.

VALUE OF PRODUCE PER ACRE UNDER CROP. The following table gives by county groups and for the Province the value per acre raised of each of the staple field crops: also the total for 1894, and the average for the fourteen years, 1882 95. The average value of all crops raised is also given:

Crops.	Lake Erie.	Lake Huron.	Georgian Bay.	West Midland.	Lake Ontario.	St. Lawrence and Ottawa.	East Midland.	Northern Districts.	The Province.		
									1895.	1894.	1882-95
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Fall wheat	11 64	14 58	17 83	12 70	12 87	15 24	13 37	14 29	13 20	11 66	16 60
Spring wheat	10 25	11 12	11 46	12 15	9 87	11 69	8 90	11 30	10 82	8 13	12 96
Barley	11 34	11 32	11 71	10 83	9 01	10 04	9 11	9 48	10 22	9 15	13 22
Oats	11 27	11 31	10 44	11 24	10 05	9 38	8 78	9 06	10 39	9 23	11 76
Rye	6 96	8 60	7 73	7 98	6 83	7 65	6 44	8 79	7 20	6 80	9 14
Peas	9 36	12 44	11 66	12 21	9 57	9 84	8 46	12 06	10 66	9 57	12 05
Corn (husking)	20 24	18 67	14 78	17 17	15 73	17 29	13 57	11 88	18 52	15 89	18 73
Corn (silo)	18 03	24 12	25 98	23 08	23 09	26 92	22 34	16 44	23 69	18 85	
Buckwheat	7 50	7 44	8 48	7 45	7 00	8 48	7 29	8 40	7 60	6 84	8 07
Beans	19 96	19 03	19 48	20 01	16 69	18 39	15 98	13 41	19 45	15 41	19 10
Potatoes	26 94	31 68	35 99	33 69	30 89	33 15	31 98	33 67	32 15	36 33	49 24
Mangel-wurzels	36 87	40 58	34 71	39 35	35 57	32 90	34 54	24 55	37 14	33 34	35 03
Carrots	44 21	44 55	42 06	47 98	42 61	44 33	40 26	36 39	44 04	41 53	43 76
Turnips	38 60	39 55	43 05	42 11	42 58	42 77	41 55	35 55	41 83	41 78	41 82
Hay	8 55	6 03	6 71	7 40	7 64	13 34	7 43	9 09	8 97	10 49	13 35
All crops:											
1895	12 68	11 78	11 88	12 45	11 25	12 78	10 08	10 99	11 98	.....	.....
1894	11 47	11 60	11 65	12 33	11 34	10 89	10 22	11 18	.....	11 43	.....
1882-95	14 82	14 70	14 37	15 83	14 53	13 68	12 88	14 07	.....	.....	14 54

The figures in the table are the result of both yield and price. Potatoes and hay are the only crops showing a less value per acre than in 1894, while corn, beans, mangels, carrots and turnips are the only ones exceeding their respective averages for the fourteen years.

PER CENT. RATIOS OF VALUES PER ACRE. By means of per cent. ratios the following table compares the values per acre of the various crops with their respective averages for the fourteen years, 1882-95, by county groups and for the Province:

Districts.	Fall wheat.	Spring wheat.	Barley.	Oats.	Rye.	Peas.	Corn.	Buckwheat.	Beans.	Potatoes.	Mangel-wurzels.	Carrots.	Turnips.	Hay.	All crops.
Lake Erie	75	85	91	95	82	89	103	100	109	62	112	116	107	62	86
Lake Huron	87	93	83	93	88	95	115	100	101	66	111	101	96	46	80
Georgian Bay	101	91	90	91	79	91	120	111	101	69	103	93	102	54	83
West Midland	74	95	76	88	88	97	104	99	101	68	107	103	98	51	79
Lake Ontario	77	74	68	83	82	82	112	87	83	67	101	92	98	57	77
St. Lawrence and Ottawa	95	86	80	86	74	85	116	100	77	64	108	111	117	100	93
East Midland	82	74	73	83	73	75	113	92	85	62	104	96	109	65	78
Northern Districts	86	74	84	87	79	96	112	94	67	54	102	104	108	77	78
The Province	80	83	77	88	79	88	108	94	102	65	106	101	100	67	82

Taking the figures for the Province, turnips exactly reach 100, but corn, beans, mangels and carrots are the only crops going above that standard. Spring wheat, barley, oats, rye, peas and potatoes do not touch as high as 100 in any group, while corn and mangels go over the standard in every district.

LABOR AND WAGES.

The spring bulletin had the following: "In only a few localities are farm laborers reported scarce. Taking the Province over there is more than a sufficiency. In most cases farmers report their help as being of good quality, but in a number of instances the statement is made, 'the right class is scarce.' Several correspondents refer to the fact that boys are being taken on, and it is hinted that in some cases they are expected to do a man's work. Wages continue to fall. The rate per month, with board, is now $15 75, which is 73 cents less than in 1894; without board it is $23.64 per month, a falling off of 84 cents. Day laborers receive 78 cents a day with board, or five cents less than in the preceding year; without board they get $1 07, or four cents less than in 1894. Servant girls on the farm are hard to get."

The August bulletin said: "There has been a more than sufficient supply of laborers, as the short crops of hay and grain have required less help than usual. Rates of wages during harvesting vary from 50 cents to $1 25 per day, according to the quality of the worker and the necessity of the case; but 75 cents and $1 were the prevailing figures. Only a few were hired merely for the harvest months, and in such cases the figures ran from $22 to $28. The ordinary monthly rate is returned as ranging from $12 to $20."

Following is the summary regarding labor and wages given in the November bulletin: "There have been more than enough farm laborers, except in odd localities. The general expression of opinion is that the rate of wages cannot rise, but must fall in sympathy with the low prices prevailing for all kinds of farm produce. There is a marked tendency to hire for shorter terms, as, apart from periods when there is a rush of work, farmers are endeavoring to do without hired assistance. Imported farm help is usually not up to the standard. It would seem from what correspondents say as if easier times and more sight seeing in the towns and cities, and shorter hours as school teachers, clerks, etc., had great influence in attracting girls from the farm, and hence the continued scarcity of domestic servants in rural portions of the Province."

WAGES OF FARM LABORERS: In the table following the rates of farm wages are given by the year and by the month, with and without board, by county groups and for the Province, in 1894 and 1995, together with the average for the fourteen years, 1882 95; also the monthly wages of domestic servants on the farm:

Districts.	Per year.						Per month in working season.						Domestics per month with board.	
	With board.			Without board.			With board.			Without board				
	1895.	1894.	1882-95.	1895.	1894.	1882-95.	1895.	1894.	1882-95.	1895.	1894.	1882-95.	1895.	1894.
	$	$	$	$	$	$	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Lake Erie	148	153	158	240	238	249	15 14	15 97	17 01	24 74	24 77	25 96	5 95	6 30
Lake Huron	147	157	161	248	244	256	15 15	16 51	17 49	25 60	26 18	27 11	5 98	6 07
Georgian Bay	144	155	157	243	247	255	15 10	16 23	17 31	24 96	25 69	26 84	5 72	6 07
West Midland	148	156	159	238	246	249	14 80	16 49	17 08	24 80	25 65	26 26	6 26	6 39
Lake Ontario	153	161	162	249	253	253	15 53	17 01	17 22	25 72	25 54	26 35	6 24	6 49
St. Lawrence and Ottawa	155	152	159	250	247	251	15 77	16 35	17 43	25 16	24 82	26 32	5 95	5 94
East Midland	154	155	162	248	253	256	15 43	15 93	17 24	24 95	25 49	26 53	5 89	5 84
Northern Districts	178	168	174	277	265	276	17 73	18 79	19 28	28 07	27 73	28 91	6 16	6 34
The Province	150	156	160	246	247	253	15 38	16 55	17 27	25 45	25 61	26 57	6 07	6 23

There has been a general decline in the rates of wages paid to all classes of farm laborers, especially in the case of those boarded. Yearly hands with board have received an average of $150, or $6 less than in the previous year, while without board $246 has been paid, or $1 less than in 1894. The monthly rate during the working season has been $15.38 with board, which is a decrease of $1.17 compared with the preceding year, and $25.45 without board, which is 16 cents less than in the year before. The wages paid to domestic servants have fallen from $6.23 per month to $6.07.

REMARKS OF CORRESPONDENTS.

From the June Bulletin.

Gosfield, Essex: No more illegitimates needed from the Homes (so-called) in the old country. It is better to let the unfortunates remain in the Homes, unless they are far better samples and with better formed heads than we have seen already.

Dunwich, Elgin: Many of the farmers have got boys brought to this country out of the crowded cities of the old country and employ less of the regular farm help—a questionable course.

Malahide, Elgin: I do not think it necessary for the Government to assist any more immigrants until they are better trained for our work.

Yarmouth, Elgin: We need good girls from the old country. The girls here crowd to the towns and cities.

Seneca, Haldimand: The demand for farm help seems to have been fairly well supplied by the young men who have come to this country to learn farming. The wages they receive is not large, being from $6 to $8 a month, by the year.

Stamford, Welland: We would rather do without domestic servants than introduce some of these imported English girls, as they too often are detrimental to the morals of the community.

Bosanquet, Lambton: There is a demand for experienced farm servants who are willing to work, but there is a surplus of boys arriving from England. They are without experience of farming, and are often a hindrance instead of a help during harvest. It seems to me sometimes that it is cruelty to send them out here, as they might be useful elsewhere in some other line of business.

Dawn, Lambton: Farmers do nearly all their own work, except in a few cases, where boys from the different "Home" institutions are employed, and in some cases abused.

Ashfield, Huron: We should encourage the importation of farm laborers from England.

Ashfield, Huron: I find in some instances farmers employing half grown boys for low wages, and forcing them to do men's work.

Howick, Huron: If more of the young men and girls, especially girls, could be induced to come out from the old country, they could earn as many dollars per month as they earn shillings there.

Wawanosh E., Huron: Keep the English Home boys out of the Province, as they are a curse to the country as a rule.

Brant, Bruce: A limited number of farm servants from the old country who understood farm work and draining could find employment, and of course any number of domestic servants.

Elderslie, Bruce: It is a very general opinion that the time has arrived when a stop should be put to the importation of waifs from European cities. They are a poor stock to begin with, and as a rule they do not improve with age.

Ekfrid, Middlesex: Any importation of foreign labor is not desirable at present.

Westminster, Middlesex: Farm pupils and boys and girls from the Homes, are being taken to fill the places formerly filled by good helpers.

Oxford E., Oxford: It would be a great benefit to the farmers if the immigrants sent to this country from England were competent men as farm laborers, but a large number of them are very incompetent.

Zorra W., Oxford: There are too many "Orphan Home" boys.

Oakland, Brant: If the Government would encourage the importation of good servant girls, and do away with the pauper trash, it would be better all around. These English street arabs who are picked up and sent out here are a curse to the country.

Oakland, Brant: This pauper class of English lads is a curse to the country, and the sooner a stop is made of making Canada a dumping ground for the refuse of England the better for us. If good, honest, steady German or Scotch farm hands were encouraged to come here they would be a very desirable class of citizens, and they would prove most efficient help. We need more good men, but have no room for the criminal classes or their offspring.

Easthope N., Perth: Let all who come to this country come at their own expense, as our fathers did, and they will value it more highly. If they cannot, by their intelligence, industry and economy, make enough to pay to bring them here, they cannot be worth, when got here, what it cost to bring them.

Beverly, Wentworth: Boys fourteen or fifteen years of age are now largely employed, and for most of the season they do as well as men.

Albion, Peel: There are too many useless boys from the "Homes."

Brock, Ontario: Let the Government encourage a better class of immigration and they will find employment, especially the domestics.

Mara, Ontario: The good-for-nothing pauper and criminal classes seem to be on the increase in Ontario, and we cannot expect anything else so long as the Government imports this class from the slums of the large cities of Europe. We would be far better without this class of immigrants. They are already becoming a burden to the country, and have a contaminating influence upon the native born Canadians.

Clarke, Durham: If we could keep our Canadians in Canada we would be well supplied. The young fry from London streets are not going to do us much good.

Oso, Frontenac: No immigrant should have any help from the Government in bringing him here.

Bastard, Leeds: We do not want to import the scum of European countries. With a few exceptions they are little better than brutes.

Winchester, Dundas: Some young Englishmen have come amongst us and more would find work.

Roxborough, Stormont: There is need of skilled labor, but we have enough of foreign tramps.

Plantagenet S., Prescott: We are better without the foreign supply of immigrants, as many of them turn out bad, murdering and burning. In fact we are afraid to hire them.

McNab, Renfrew: We should raise our future farm laborers and domestic servants, and not import the off-scourings of the old country.

Medora, Muskoka: Barnardo boys are kept, and save wages in some places.

From the November Bulletin.

Gosfield N., Essex: There is no scarcity of girls, but they seem to have a great dislike of hiring out as domestics.

Harwich, Kent: Domestic servants cannot be got on a farm. Those who work out find places in town where work is light, amusements plentiful, and where they can make a show on the streets and capture some Slick Aleck who wears a boiled shirt and parts his hair in the middle.

Harwich, Kent: The farmer's wife is the worst off of any class of women in one sense, for she cannot get help. Girls seem to think it degrading to do farm work, and the towns swallow up all the help of that kind available, as their work is light and amusements plentiful, or domestic service is easier. Many girls raised on farms are now residing in the towns and cities, engaged in sewing and such work, or in teaching bookkeeping or typewriting, which they consider more respectable.

Howard, Kent: Domestic servants will always be scarce until the Canadian mistress will learn to treat her domestic help with more consideration. I often think I see in many cases a fair illustration of the beggar on horseback.

Raleigh, Kent: Nine-tenths of the farmers are well able and willing to keep their daughters at home rather than have them be servants to the city dames, to be fed on the pieces left by the family. That one word "servant" is odious to refined girls, such as most farmers' daughters are in this locality.

Walsingham N., Norfolk: Domestic servants hard to find on account of girls preferring city situations.

Wawanosh, E., Huron: As to the future supply of farm laborers and domestic servants, the sons and daughters of the farmers will doubtless keep the market well supplied. The "Home boys" are more bother than they are worth, and have to be watched closely.

Brant, Bruce: What we want to do is to keep the sons and daughters of well to do farmers upon the farm by making the homes more attractive and home-like.

Keppel, Grey: Girls are flocking to towns, and are willing to act as domestic servants. Anything that will remove drudgery and undue length of hours, so that a domestic will not have to work her life out, and will at the same time keep her somewhat lady like, will be a step in the right direction.

Gwillimbury W., Simcoe: A good class of domestic servants would be desirable, but some importations that we have had are not calculated to improve the moral tone of the community.

Dorchester N., Middlesex: The only help needed here is female domestic assistance. Girls seem to think that to work in a farm house is a disgrace, and they would rather suffer considerable than what they call "degrade" themselves.

Ekfrid, Middlesex: Domestic servants will always be scarce on the farms while situations in cities hold out higher inducements. The only sure source for the farmers supply of labor is for the sons and daughters in the families to take hold, rather than for them to go into professions and city life.

McGillivray, Middlesex: Domestic servants are always in demand, the tendency being to rush to the cities for larger wages and gayer times. The girl of to day appears to look upon domestic service as servile, if not degrading, and prefers to work in a dirty cigar or shoe factory. Something is wrong here.

Waterloo, Waterloo: Domestic servants are scarce, and will be as long as women take the place of men in offices, clerking, etc.

Nessagaweya, Halton: A certain class of men from some parts of the old land are not only useless but dangerous and unbearable, conceit and stupidity being very prominent features in their get up.

Haldimand, Northumberland: The girls have all got above working for farmers. They want to go to cities, or teach school or music, and act the lady.

Kingston, Frontenac: Female domestic servants are not so readily obtained as formerly, caused, no doubt, by other branches of occupation being regarded as preferable, such as in cotton, knitting and other factories; also finding positions in stores and offices.

Osgoode, Russell: Domestic servants do not like farm work. They flock to the cities, expecting larger wages and better times; but a great many of them find it a mistake.

Pittsburg, Frontenac: Domestic servants are generally hard to get in the country. All want to crowd into the towns if possible.

Crosby N., Leeds: The girls here are mostly all teachers or musicians. The few left run sewing machines, except poor Biddy. The Orphans' Homes supply this want.

Otonabee, Peterborough: It would appear as if girls do not like to work under a mistress. They do not like to hire in the country, and do not like to have to take the second table in towns, and so they choose to be sewing girls.

Monck, Muskoka: To speak of "domestics" in a farm house seems like a joke. But there are many farmers' daughters who can and do make themselves useful in the house, or (in haying or harvesting) on the field.

STATISTICS OF

VALUES, RENT AND FARM WAGES.

FARM VALUES—LAND, BUILDINGS AND IMPLEMENTS.

TABLE I. Showing by County Municipalities and groups of Counties the value of Farm Land, Buildings and Implements in Ontario in 1894 and 1895.

Counties.	Farm Lands.		Farm Buildings.		Farm Implements.	
	1895.	1894.	1895.	1894.	1895.	1894.
	$	$	$	$	$	$
Essex	16,217,416	16,665,657	4,641,629	4,677,278	1,300,167	1,301,302
Kent	22,259,277	22,685,926	6,027,105	6,047,077	1,625,368	1,576,861
Elgin	16,054,905	16,513,177	5,423,470	5,264,385	1,388,924	1,349,298
Norfolk	10,947,874	11,436,435	4,297,780	4,398,494	1,066,809	1,115,370
Haldimand	8,456,748	8,793,297	3,742,798	3,749,600	964,277	971,316
Welland	8,769,668	8,878,877	3,604,966	3,587,671	821,185	827,929
Totals	82,705,888	84,973,369	27,737,748	27,724,505	7,166,730	7,142,076
Lambton	17,706,182	18,408,344	5,143,849	5,160,938	1,376,214	1,382,590
Huron	28,093,333	28,552,372	9,233,988	9,225,221	2,329,553	2,391,814
Bruce	19,287,432	19,726,547	6,795,938	6,742,825	1,772,440	1,794,603
Totals	65,086,947	66,687,263	21,173,775	21,128,984	5,478,207	5,569,007
Grey	20,779,438	21,021,183	7,809,524	7,763,315	2,332,785	2,294,417
Simcoe	23,336,070	24,515,234	7,830,935	7,951,337	2,161,411	2,216,336
Totals	44,115,508	45,536,417	15,640,459	15,714,652	4,494,196	4,510,753
Middlesex	30,556,631	31,953,613	10,387,968	10,267,688	2,347,023	2,403,982
Oxford	20,661,472	21,142,914	7,681,475	7,704,804	1,595,306	1,644,460
Brant	9,586,115	9,819,220	3,880,313	4,001,424	759,007	817,041
Perth	20,057,817	20,176,073	7,119,813	6,983,125	1,770,135	1,757,289
Wellington	19,787,879	20,152,724	7,559,082	7,403,961	1,771,915	1,799,428
Waterloo	12,469,928	12,786,402	5,067,707	5,090,160	1,201,752	1,233,735
Dufferin	8,270,544	8,481,094	2,581,455	2,512,920	754,824	749,540
Totals	121,390,386	124,512,040	44,277,813	43,964,082	10,199,962	10,405,475
Lincoln	9,138,693	9,044,305	4,190,277	4,176,094	923,935	919,376
Wentworth	12,800,935	13,125,211	5,027,809	4,916,050	1,077,103	1,113,793
Halton	9,987,544	9,827,567	3,872,868	3,866,676	771,509	791,899
Peel	11,810,462	12,469,485	4,572,290	4,542,753	980,519	999,949
York	26,518,948	27,568,440	8,798,570	8,854,318	1,902,597	1,956,849
Ontario	17,055,975	17,886,571	6,183,167	6,402,830	1,383,346	1,432,699
Durham	13,240,820	13,760,467	4,575,937	4,524,848	1,042,049	1,069,016
Northumberland	12,806,450	13,115,690	5,072,450	5,149,987	1,244,693	1,286,891
Prince Edward	7,142,553	7,459,541	3,116,050	3,185,939	739,311	757,172
Totals	120,502,380	124,257,277	45,409,418	45,619,495	10,065,062	10,327,644
Lennox and Addington	7,438,971	7,690,845	3,181,072	3,285,905	740,313	778,409
Frontenac	7,645,466	7,758,517	2,822,511	2,893,959	768,192	816,883
Leeds	11,030,725	11,292,031	4,068,006	4,108,854	1,013,200	1,015,895
Grenville	6,788,431	7,007,764	2,649,722	2,716,711	616,521	580,392
Dundas	7,212,133	7,478,110	2,682,989	2,733,928	727,199	729,548
Stormont	5,702,145	5,614,315	2,315,438	2,219,203	589,145	560,788
Glengarry	6,236,217	6,422,096	2,742,442	2,710,764	692,917	702,907
Prescott	6,420,004	6,629,929	2,563,337	2,501,227	672,989	681,500
Russell	4,443,319	4,432,723	1,214,989	1,229,779	432,202	432,654
Carleton	17,498,182	17,908,222	5,095,578	4,984,142	1,494,823	1,483,181
Renfrew	8,221,466	8,193,165	3,220,424	3,161,424	1,009,356	1,003,619
Lanark	8,858,690	8,671,082	3,431,882	3,367,153	865,522	869,464
Totals	97,495,749	99,128,799	35,988,390	35,913,049	9,622,379	9,655,240
Victoria	10,895,956	10,745,158	3,350,240	3,429,039	961,414	996,153
Peterborough	9,553,772	10,062,653	3,164,174	3,200,301	764,029	781,603
Haliburton	1,078,690	1,153,982	317,362	333,254	102,641	110,046
Hastings	13,408,122	13,706,298	5,065,909	5,095,956	1,362,588	1,336,962
Totals	34,936,540	35,668,091	11,897,685	12,058,550	3,190,672	3,224,764
Muskoka	1,893,834	1,919,608	702,200	703,240	240,693	234,510
Parry Sound	1,710,325	1,730,966	539,826	523,732	200,974	193,492
Nipissing	663,494	587,729	170,648	152,814	65,071	59,760
Algoma	2,437,421	2,244,558	610,708	568,463	220,439	207,451
Totals	6,705,074	6,482,861	2,023,382	1,948,249	727,177	695,213
The Province	572,938,472	587,246,117	204,148,670	204,071,566	50,944,385	51,530,172

FARM VALUES—LIVE STOCK AND TOTAL PROPERTY—RENTALS.

TABLE II. Showing by County Municipalities and groups of Counties the values of Farm Live Stock and total Farm Property in Ontario in 1894 and 1895; also the rent per acre of leased farms as reported in 1895, with the average derived for the ten years, 1886-95.

Counties.	Farm Live Stock.		Total Farm Property.		Rent per acre on land—			
					Occupied.		Cleared.	
	1895.	1894.	1895.	1894.	1895.	1886-95.	1895.	1886-95.
	$	$	$	$	$ c.	$ c.	$ c.	$ c.
Essex	2,059,842	2,222,464	24,219,054	24,866,701	2 48	2 26	3 08	3 25
Kent	3,054,232	3,255,627	32,965,982	33,565,491	2 49	2 59	3 30	3 57
Elgin	2,690,627	2,951,356	25,557,926	26,078,216	2 37	2 30	2 94	3 11
Norfolk	1,798,429	2,020,175	18,110,892	18,970,474	1 89	1 89	2 42	2 56
Haldimand	1,616,394	1,646,233	14,780,217	15,160,446	1 85	1 78	2 27	2 27
Welland	1,340,127	1,393,825	14,535,946	14,688,302	2 00	2 10	2 30	2 57
Totals	12,559,651	13,489,680	130,170,017	133,329,630	2 26	2 18	2 84	2 93
Lambton	2,901,302	3,103,753	27,127,547	28,055,625	1 79	1 85	2 50	2 78
Huron	5,291,587	5,841,014	44,948,461	46,010,421	2 23	2 18	2 69	2 77
Bruce	4,302,449	4,568,730	32,158,259	32,832,705	1 55	1 67	2 14	2 25
Totals	12,495,338	13,513,497	104,234,267	106,898,751	1 89	1 92	2 46	2 58
Grey	5,056,812	5,607,081	35,978,559	36,685,996	1 34	1 30	1 92	1 89
Simcoe	4,256,357	4,590,818	37,584,773	39,273,725	1 77	1 94	2 28	2 56
Totals	9,313,169	10,197,899	73,563,332	75,959,721	1 53	1 57	2 09	2 21
Middlesex	5,609,819	5,948,223	48,901,441	50,573,506	2 47	2 52	3 03	3 26
Oxford	3,620,157	3,939,904	33,368,410	34,432,082	2 62	2 70	3 19	3 45
Brant	1,472,506	1,582,080	15,697,941	16,219,765	2 56	2 77	3 13	3 37
Perth	3,769,107	4,080,384	32,716,872	32,996,871	2 48	2 35	2 92	2 94
Wellington	4,299,262	4,447,681	33,418,138	33,803,794	1 94	1 98	2 58	2 57
Waterloo	1,932,385	2,104,011	20,671,772	21,214,308	2 22	2 23	2 68	2 80
Dufferin	1,541,180	1,627,086	13,148,003	13,370,640	1 61	1 55	2 18	2 18
Totals	22,244,416	23,729,369	198,112,577	202,610,966	2 32	2 31	2 88	2 97
Lincoln	1,274,965	1,364,988	15,527,870	15,504,763	2 65	2 33	3 12	2 85
Wentworth	1,836,270	2,011,715	20,742,117	21,168,769	2 79	2 95	3 52	3 69
Halton	1,494,356	1,602,629	16,125,277	16,088,771	2 46	2 35	3 31	3 04
Peel	2,034,763	2,217,116	19,398,034	20,259,303	2 54	2 70	2 98	3 24
York	3,634,687	3,875,644	40,854,802	42,255,254	3 11	3 08	3 70	3 72
Ontario	3,078,221	3,551,352	27,700,709	29,272,452	2 53	2 71	3 10	3 34
Durham	2,078,225	2,315,507	20,937,031	21,669,838	2 30	2 68	2 74	3 24
Northumberland	2,332,249	2,521,842	21,455,842	22,074,410	1 88	2 03	2 32	2 53
Prince Edward	1,186,633	1,325,202	12,184,547	12,727,854	1 80	2 05	2 18	2 51
Totals	18,950,369	20,785,995	194,927,229	200,990,411	2 50	2 62	3 05	3 21
Lennox & Addington	1,457,786	1,628,851	12,818,141	13,384,010	1 56	1 57	2 07	2 31
Frontenac	1,526,210	1,688,718	12,762,379	13,158,077	1 34	1 21	1 84	1 83
Leeds	2,058,723	2,195,281	18,170,654	18,612,064	1 53	1 45	2 22	2 19
Grenville	1,208,497	1,288,276	11,268,171	11,593,143	1 53		2 07	
Dundas	1,279,436	1,340,549	11,901,757	12,282,135	1 90	1 71	2 80	2 73
Stormont	1,121,399	1,222,623	9,728,127	9,646,929	1 47	1 45	2 40	2 26
Glengarry	1,472,792	1,450,794	11,144,268	11,286,561	1 35	1 41	2 10	2 30
Prescott	1,200,462	1,245,411	10,836,794	11,058,067	1 57	1 62	2 43	2 32
Russell	885,811	895,749	6,976,824	6,999,905	1 33	1 28	2 38	2 24
Carleton	3,048,704	2,954,783	27,187,287	27,520,838	1 88	1 76	2 50	2 57
Renfrew	2,372,486	2,389,800	14,824,752	14,748,008	90	84	1 69	1 70
Lanark	2,135,253	2,242,411	15,291,347	15,150,110	91	85	1 54	1 40
Totals	19,768,064	20,543,246	162,874,579	165,240,334	1 45	1 36	2 [illegible]	2 16
Victoria	1,877,708	2,242,055	17,085,318	17,412,[illegible]	1 [illegible]	1 67	2 15	2 [illegible]
Peterborough	1,585,778	1,771,510	15,067,753	15,816,067	1 40	1 27	2 [illegible]	2 06
Haliburton	302,349	324,037	1,801,042	1,921,319	34	34	1 [illegible]	1 38
Hastings	2,916,489	3,035,825	22,[illegible]	23,[illegible]	1 [illegible]	1 61	2 21	2 42
Totals	6,681,324	7,373,427	56,[illegible]	58,[illegible]	1 34	1 44	2 09	2 34
Muskoka	[illegible]	611,782	3,422,[illegible]	3,[illegible]	35	34	1 62	1 61
Parry Sound	[illegible]	[illegible]	2,994,[illegible]	2,[illegible]	39	45	1 [illegible]	1 [illegible]
Nipissing	1[illegible]	145,567	1,031,230	945,870	45	47	2 05	2 57
Algoma	[illegible]	648,[illegible]	3,[illegible]	3,[illegible]	57	62	1 [illegible]	1 72
Totals	1,[illegible]	1,[illegible]	11,401,352	11,040,862	44	44	1 73	1 [illegible]
The Province	103,958,047	111,547,[illegible]	931,[illegible]	964,[illegible]	1 87	1 98	2 [illegible]	2 76

FARM VALUES—AVERAGE PER ACRE.

TABLE III. Showing by County Municipalities and groups of Counties the average value per acre occupied of Farm Land, Buildings, Implements and Live Stock in Ontario for the years 1894 and 1895.

Counties.	Land.		Buildings.		Implements.		Live Stock.		Total property.	
	1895.	1894.	1895.	1894.	1895.	1894.	1895.	1894.	1895.	1894.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Essex	37 64	38 78	10 77	10 88	3 02	3 03	4 78	5 17	56 21	57 86
Kent	39 35	40 22	10 65	10 72	2 87	2 80	5 40	5 77	58 27	59 51
Elgin	36 78	37 82	12 42	12 06	3 18	3 09	6 16	6 76	58 54	59 73
Norfolk	27 65	28 90	10 85	11 11	2 69	2 82	4 54	5 10	45 73	47 93
Haldimand	30 15	31 39	13 34	13 38	3 44	3 47	5 76	5 87	52 69	54 11
Welland	38 73	38 80	15 92	15 68	3 62	3 62	5 92	6 09	64 19	64 19
Group	35 40	36 39	11 87	11 87	3 07	3 06	5 38	5 78	55 72	57 10
Lambton	26 83	27 84	7 79	7 81	2 08	2 09	4 40	4 69	41 10	42 43
Huron	35 17	35 70	11 56	11 53	2 92	2 99	6 62	7 30	56 27	57 52
Bruce	22 60	23 38	7 96	7 99	2 08	2 13	5 04	5 41	37 68	38 91
Group	28 15	28 94	9 16	9 17	2 37	2 41	5 40	5 86	45 08	46 38
Grey	19 56	19 81	7 35	7 31	2 19	2 16	4 76	5 28	33 86	34 56
Simcoe	24 13	25 45	8 10	8 25	2 24	2 30	4 40	4 77	38 87	40 77
Group	21 74	22 49	7 71	7 76	2 21	2 23	4 59	5 03	36 25	37 51
Middlesex	40 34	42 15	13 71	13 54	3 10	3 17	7 40	7 84	64 55	66 70
Oxford	43 79	44 79	16 28	16 32	3 38	3 48	7 67	8 34	71 12	72 93
Brant	44 41	45 39	17 97	18 50	3 52	3 78	6 82	7 31	72 72	74 98
Perth	38 69	38 94	13 73	13 47	3 41	3 39	7 27	7 87	63 10	63 67
Wellington	31 50	32 14	12 03	11 81	2 82	2 87	6 85	7 09	53 20	53 91
Waterloo	40 74	41 73	16 56	16 61	3 93	4 03	6 31	6 87	67 54	69 24
Dufferin	23 26	23 77	7 26	7 04	2 12	2 10	4 33	4 56	36 97	37 47
Group	37 31	38 25	13 61	13 51	3 13	3 19	6 84	7 29	60 89	62 24
Lincoln	47 72	47 13	21 88	21 76	4 82	4 79	6 66	7 11	81 08	80 79
Wentworth	47 01	48 30	18 47	18 09	3 96	4 10	6 74	7 40	76 18	77 89
Halton	44 42	43 65	17 23	17 17	3 43	3 52	6 65	7 12	71 73	71 46
Peel	40 96	43 23	15 86	15 75	3 40	3 47	7 06	7 68	67 28	70 13
York	49 59	51 40	16 45	16 51	3 56	3 65	6 80	7 22	76 40	78 78
Ontario	34 10	35 74	12 36	12 79	2 77	2 86	6 16	7 10	55 39	58 49
Durham	35 76	37 12	12 36	12 21	2 81	2 88	5 61	6 25	56 54	58 46
Northumberland	29 40	30 22	11 65	11 86	2 86	2 96	5 35	5 81	49 26	50 85
Prince Edward	31 00	32 43	13 53	13 85	3 21	3 29	5 15	5 76	52 89	55 33
Group	39 53	40 75	14 90	14 96	3 30	3 39	6 22	6 82	63 95	65 92
Lennox and Addington	17 52	17 84	7 49	7 62	1 74	1 81	3 43	3 78	30 18	31 05
Frontenac	11 23	11 53	4 14	4 30	1 13	1 21	2 24	2 51	18 74	19 55
Leeds	23 47	24 06	8 66	8 76	2 16	2 16	4 38	4 68	38 67	39 66
Grenville	25 00	25 85	9 76	10 02	2 27	2 14	4 45	4 75	41 48	42 76
Dundas	30 44	31 54	11 32	11 53	3 07	3 08	5 40	5 65	50 23	51 80
Stormont	22 79	22 49	9 25	8 84	2 35	2 23	4 48	4 87	38 87	38 43
Glengarry	21 65	22 47	9 52	9 48	2 41	2 46	5 11	5 07	38 69	39 48
Prescott	22 39	23 20	8 94	8 75	2 35	2 38	4 18	4 36	37 86	38 69
Russell	17 68	17 58	4 83	4 88	1 72	1 71	3 53	3 55	27 76	27 72
Carleton	30 97	31 64	9 02	8 81	2 64	2 62	5 40	5 22	48 03	48 29
Renfrew	8 78	8 76	3 44	3 38	1 08	1 07	2 53	2 56	15 83	15 77
Lanark	13 20	12 87	5 12	5 00	1 29	1 29	3 18	3 33	22 79	22 49
Group	18 28	18 59	6 75	6 74	1 80	1 81	3 71	3 85	30 54	30 99
Victoria	18 62	18 35	5 72	5 86	1 64	1 70	3 21	3 83	29 19	29 74
Peterborough	17 10	18 23	5 66	5 80	1 37	1 42	2 84	3 21	26 97	28 66
Haliburton	1 92	2 05	56	59	18	19	54	57	3 20	3 40
Hastings	13 54	13 74	5 12	5 11	1 38	1 34	2 94	3 04	22 98	23 23
Group	12 96	13 22	4 41	4 47	1 18	1 19	2 48	2 73	21 03	21 61
Muskoka	3 57	3 66	1 32	1 34	45	45	1 11	1 16	6 45	6 61
Parry Sound	3 37	3 54	1 06	1 07	39	40	1 07	1 04	5 89	6 05
Nipissing	2 77	2 74	71	71	27	28	63	68	4 38	4 41
Algoma	2 95	2 75	74	70	27	25	80	79	4 76	4 49
Group	3 19	3 17	96	95	35	34	92	94	5 42	5 40
The Province	24 79	25 49	8 83	8 86	2 20	2 23	4 50	4 84	40 32	41 42

VALUES—LIVE STOCK.

TABLE IV. Showing by County Municipalities and groups of Counties the value of Horses for 1894 and 1895, Milch Cows and Other Cattle for 1895, and the total Cattle for 1894 and 1895.

Counties.	Horses.		Cattle.			
					Total.	
	1895.	1894.	Milch Cows.	Other Cattle.	1895.	1894.
	$	$	$	$	$	$
Essex	941,065	1,066,940	404,291	270,337	674,628	707,796
Kent	1,455,738	1,588,992	490,260	543,062	1,033,322	1,092,259
Elgin	1,037,380	1,164,316	603,021	529,142	1,132,163	1,231,238
Norfolk	794,037	990,172	440,106	215,054	655,160	668,908
Haldimand	700,566	742,630	365,810	267,786	633,596	622,030
Welland	650,442	711,248	289,138	192,748	481,886	471,779
Totals	5,579,228	6,264,298	2,592,626	2,018,129	4,610,755	4,794,010
Lambton	1,029,846	1,175,809	552,511	848,195	1,400,706	1,423,772
Huron	1,953,640	2,233,189	1,009,684	1,539,034	2,548,718	2,753,842
Bruce	1,501,082	1,579,827	892,214	1,161,264	2,053,478	2,203,679
Totals	4,484,568	4,988,825	2,454,409	3,548,493	6,002,902	6,381,293
Grey	1,828,153	2,119,662	1,079,538	1,216,641	2,296,179	2,443,101
Simcoe	1,746,554	1,999,755	808,123	824,586	1,632,709	1,692,943
Totals	3,574,707	4,119,417	1,887,661	2,041,227	3,928,888	4,136,044
Middlesex	1,938,446	2,222,118	1,384,500	1,487,882	2,872,382	2,898,272
Oxford	1,252,879	1,477,470	1,208,399	713,119	1,921,518	1,987,822
Brant	595,482	705,093	398,734	211,507	606,241	610,146
Perth	1,406,563	1,610,201	970,174	874,133	1,844,307	1,913,128
Wellington	1,467,228	1,669,238	997,560	1,020,803	2,018,363	1,963,201
Waterloo	774,553	911,575	470,327	353,054	823,381	871,402
Dufferin	603,687	673,767	312,223	341,465	653,688	670,938
Totals	8,038,838	9,269,462	5,736,917	5,001,963	10,738,880	10,914,909
Lincoln	636,893	734,485	282,150	150,019	432,169	446,964
Wentworth	806,591	969,238	470,662	270,645	741,307	748,105
Halton	573,633	665,934	376,737	322,172	698,909	699,033
Peel	862,719	1,011,604	466,241	379,626	845,867	839,668
York	1,730,616	2,018,294	849,700	484,495	1,334,195	1,273,238
Ontario	1,249,258	1,515,569	670,102	645,276	1,315,378	1,486,101
Durham	904,608	1,131,094	433,640	371,233	804,873	810,621
Northumberland	1,012,793	1,171,796	641,020	309,436	950,456	986,284
Prince Edward	611,889	770,162	309,224	129,442	438,666	406,273
Totals	8,388,950	9,988,176	4,499,476	3,062,344	7,561,820	7,666,287
Lennox & Addington	582,743	680,851	423,987	250,790	674,777	732,690
Frontenac	532,044	626,013	536,734	286,925	773,659	824,416
Leeds	626,350	714,850	912,612	240,959	1,153,571	1,172,721
Grenville	410,165	447,252	493,749	139,417	633,166	659,026
Dundas	430,487	503,583	548,416	144,926	693,342	665,926
Stormont	373,651	453,914	440,441	150,255	590,696	625,196
Glengarry	522,648	571,247	571,158	188,312	759,470	684,938
Prescott	422,344	487,972	445,536	159,916	605,452	567,785
Russell	333,015	362,609	281,296	145,981	427,277	391,483
Carleton	1,134,074	1,188,380	1,009,824	516,723	1,526,547	1,565,001
Renfrew	805,531	942,176	569,980	446,617	1,016,597	969,150
Lanark	692,174	719,171	695,392	448,026	1,143,418	1,139,732
Totals	6,818,143	7,698,018	6,968,125	3,067,847	10,005,972	9,796,874
Victoria	813,554	1,023,800	362,717	412,698	775,415	851,806
Peterborough	672,854	719,496	434,024	286,662	720,686	750,465
Haliburton	116,544	121,924	71,763	65,080	136,843	150,220
Hastings	1,070,868	1,270,767	1,039,624	373,173	1,412,797	1,363,811
Totals	2,673,820	3,136,987	1,908,128	1,137,613	3,045,741	3,116,302
Muskoka	278,720	297,548	140,966	125,021	265,987	251,015
Parry Sound	223,093	203,670	117,800	118,175	235,975	212,295
Nipissing	70,649	74,044	30,581	27,341	57,922	49,772
Algoma	293,048	260,479	150,080	142,865	292,945	254,842
Totals	765,510	790,431	389,397	413,662	813,059	771,868
The Province	40,285,794	45,295,614	26,416,739	20,291,278	46,708,017	47,577,587

VALUES—LIVE STOCK.

TABLE V. Showing by County Municipalities and groups of Counties the value of Sheep, Hogs and Poultry for the years 1894 and 1895.

Counties.	Sheep.		Hogs.		Poultry.	
	1895.	1894.	1895.	1894.	1895.	1894.
	$	$	$	$	$	$
Essex	104,094	110,276	281,183	276,206	58,872	61,246
Kent	171,356	197,524	335,144	318,121	58,672	58,731
Elgin	186,941	235,248	283,653	268,972	50,490	51,582
Norfolk	127,581	155,589	181,101	169,125	40,550	36,381
Haldimand	140,847	145,008	105,273	101,853	36,112	34,712
Welland	99,472	108,324	72,654	61,982	35,673	40,492
Totals	830,291	951,969	1,259,008	1,196,259	280,369	283,144
Lambton	230,517	284,651	181,916	161,802	58,317	57,719
Huron	433,086	507,049	263,650	251,534	92,493	95,400
Bruce	486,027	526,474	195,334	191,054	66,528	67,696
Totals	1,149,630	1,318,174	640,900	604,390	217,338	220,815
Grey	572,311	660,097	278,480	294,180	81,689	90,041
Simcoe	425,434	448,983	360,435	349,821	91,225	99,316
Totals	997,745	1,109,080	638,915	644,001	172,914	189,357
Middlesex	377,517	409,115	308,224	302,627	113,250	116,091
Oxford	107,298	140,039	281,366	277,920	57,096	56,653
Brant	107,304	116,170	138,072	123,503	26,407	27,168
Perth	229,784	266,763	219,424	219,101	69,029	71,191
Wellington	441,136	464,732	289,838	272,999	82,697	77,511
Waterloo	144,633	144,555	149,627	133,076	40,191	43,403
Dufferin	135,133	137,491	111,079	110,006	37,593	34,884
Totals	1,542,805	1,678,865	1,497,630	1,439,232	426,263	426,901
Lincoln	99,142	105,032	73,102	74,590	33,659	33,917
Wentworth	132,451	140,678	112,830	113,718	43,091	39,976
Halton	102,866	111,986	87,912	90,680	31,036	34,996
Peel	112,654	145,661	162,111	160,492	51,412	59,691
York	230,041	249,546	255,386	246,964	84,449	87,602
Ontario	219,501	257,586	224,423	222,766	69,711	69,330
Durham	162,745	179,633	149,226	132,665	56,773	61,494
Northumberland	133,852	153,308	175,948	156,985	59,200	53,469
Prince Edward	47,635	53,431	63,920	70,157	24,523	25,179
Totals	1,240,887	1,396,861	1,304,858	1,269,017	453,854	465,654
Lennox and Addington	94,281	101,552	79,618	86,802	26,366	26,956
Frontenac	106,999	126,185	84,288	82,318	29,120	29,786
Leeds	97,544	125,622	146,420	142,570	34,878	39,518
Grenville	55,701	62,758	75,092	84,096	34,383	35,134
Dundas	44,165	50,872	79,565	84,312	31,977	35,856
Stormont	53,735	58,714	67,730	59,704	26,587	25,095
Glengarry	80,652	91,510	79,576	75,520	30,416	27,579
Prescott	60,446	68,417	83,682	90,861	28,538	30,376
Russell	62,281	68,513	61,111	58,292	22,602	24,852
Carleton	170,495	184,732	149,266	148,159	69,324	70,511
Renfrew	259,750	257,394	178,820	164,530	48,788	45,750
Lanark	222,100	230,418	98,869	104,723	38,691	48,362
Totals	1,308,149	1,426,687	1,184,137	1,181,892	421,660	439,775
Victoria	145,709	193,369	111,996	126,242	41,034	44,838
Peterborough	109,113	127,572	99,221	101,227	43,904	39,750
Haliburton	28,981	32,234	15,590	15,749	4,391	4,810
Hastings	139,030	166,069	236,416	222,613	56,378	55,665
Totals	422,833	519,244	463,223	465,831	145,707	145,063
Muskoka	67,824	63,961	25,557	27,627	12,960	12,937
Parry Sound	63,070	55,259	29,824	28,157	9,377	9,143
Nipissing	7,282	6,876	12,258	11,119	3,696	3,756
Algoma	77,926	79,695	44,901	41,737	12,485	11,973
Totals	216,102	205,791	112,540	108,640	38,518	37,809
The Province	7,708,442	8,606,671	7,101,211	6,909,262	2,156,623	2,208,518

VALUES OF LIVE STOCK SOLD IN YEAR.

TABLE VI. Showing by County Municipalities and groups of Counties the value of Live Stock sold or killed for the years ending June 30th, 1894 and 1895.

Counties.	Horses.	Cattle.	Sheep.	Hogs.	Poultry.	Total.	
						1895.	1894.
	$	$	$	$	$	$	$
Essex	70,400	174,022	28,601	344,070	23,129	640,222	733,463
Kent	105,092	383,366	59,459	442,403	23 619	1,013,939	1,057,284
Elgin	66,850	392,596	79,916	428,366	25,982	993,710	1,008,010
Norfolk	35,056	136,061	47,948	267,401	19,515	505,981	541,000
Haldimand	39,530	126,437	46,822	173,050	16,330	402,169	422,771
Welland	28,820	112,297	36,526	102.322	18,482	298,447	352,198
Totals	345,748	1,324,779	299,272	1,757,612	127,057	3,854,468	4,114,726
Lambton	78,812	572,634	82,371	231,555	21,307	986,679	973,169
Huron	179,985	1,053,192	149,475	445,396	35,104	1,863,152	2,116,166
Bruce	107,848	849,437	143,348	301,303	22,813	1,424,749	1,594,729
Totals	366,645	2,475,263	375,194	978,254	79,224	4,274,580	4,684,064
Grey	130,152	753,095	158,985	425,594	27,021	1,494,847	1,676,774
Simcoe	136,488	419,184	117,702	407,925	33,534	1,114,833	1,218,627
Totals	266,640	1,172,279	276,687	833,519	60,555	2,609,680	2,895,401
Middlesex	113,582	1,005,831	129,239	438,011	55,400	1,742,063	1,993,944
Oxford	89,034	566,278	52,735	448,997	28,763	1,189,807	1,332,023
Brant	29,444	183,200	34,795	196,757	11,815	456,011	492,265
Perth	88,256	590,507	77,750	347,071	20.686	1,124,270	1,288,551
Wellington	101,140	872,386	159,128	501,232	31,018	1,664,904	1,750,424
Waterloo	40,810	553,765	50,582	247,443	14,654	907,254	969,845
Dufferin	45,976	210,589	38,754	147,447	15,761	458,527	499,330
Totals	508,242	3,982,556	542,983	2,326,958	173,097	7,533,836	8,326,382
Lincoln	28,602	121,817	36,084	107,717	18,186	312,406	355,703
Wentworth	47,002	184,885	50,599	185,073	18,459	486,018	512,228
Halton	21,224	177,770	38,180	139,405	15,708	392,287	439,630
Peel	74,370	291,004	51,184	243,344	26,720	686,622	680,686
York	108,697	413,670	80,730	431,647	41,404	1,076,148	1,215,053
Ontario	105,903	485,098	77,834	329,104	31,369	1,030,308	1,134,011
Durham	75,924	289,567	51,297	221,786	23,698	662,272	692,149
Northumberland	71,880	212,831	38,131	239,950	24,013	586,805	625,871
Prince Edward	24,900	58,149	20,104	98,880	8,011	209,044	216,329
Totals	558,502	2,235,791	444,143	1,996,856	207,568	5,442,860	5,871,660
Lennox and Addington	38,676	101,464	51,597	109,883	8,760	290,380	334,516
Frontenac	27,956	112,444	45,130	105,309	14,430	306,269	343,589
Leeds	34,825	128,170	30,945	169,406	13,960	374,496	409,056
Grenville	24,013	68,575	23,842	96,880	12,701	225,011	240,598
Dundas	19,215	47,688	17,166	98,317	8,686	191,072	236,418
Stormont	19,400	65,490	15,019	68,809	5,610	174,333	180,579
Glengarry	33,275	94,894	21,480	97,704	8,870	255,723	276,913
Prescott	29,823	65,452	20,293	95,061	10,949	211,678	196,766
Russell	25,276	60,565	18,647	64,638	8,810	177,931	168,792
Carleton	66,424	242,102	55,010	216,217	30,927	610,680	636,784
Renfrew	42,000	185,691	52,214	173,602	15,154	468,661	498,232
Lanark	35,410	211,228	59,510	148,237	13,127	467,402	501,732
Totals	392,693	1,383,768	390,848	1,435,263	151,974	3,754,546	3,983,688
Victoria	41,305	197,162	36,530	165,034	10,787	450,818	471,411
Peterborough	36,234	127,872	29,702	149,931	19,432	363,171	438,085
Haliburton	5,888	26,966	3,780	14,545	1,039	52,168	60,974
Hastings	43,840	163,166	33,929	278,609	17,097	536,683	676,572
Totals	127,267	515,166	105,891	607,069	48,355	1,403,680	1,646,822
Muskoka	17,019	56,041	17,522	38,899	4,527	129,008	141,597
Parry Sound	9,747	49,666	11,917	38,024	2,879	109,641	119,401
Nipissing	7,811	11,734	2,980	11,585	1,478	35,118	38,097
Algoma	16,077	65,664	17,465	53,896	3,620	156,722	149,811
Totals	50,654	182,525	49,594	132,204	12,504	427,481	448,906
The Province	2,616,391	13,272,127	2,484,612	10,067,867	860,334	29,301,131	31,365,589

VALUES—LIVE STOCK PER HEAD.

TABLE VII. Showing by County Municipalities and groups of Counties the value per head of the several classes of Horses and Cattle in the Province for the year 1895, and also the value per head of all Horses and Cattle sold for the same period.

Counties.	Horses.					Cattle.				
	Working horses.	Breeding mares.	Colts.	Stallions.	Horses sold in year.	Working oxen.	Milch cows.	Store cattle.	Other cattle.	Cattle sold in year.
	$	$	$	$	$	$	$ c.	$ c.	$ c	$ c.
Essex	64	62	40	233	64	40	30 25	21 92	11 73	25 85
Kent	72	77	48	295	86	40	30 00	27 40	13 13	33 75
Elgin	68	69	45	209	70	50	30 01	29 39	12 29	34 39
Norfolk	63	57	45	300	56	38	27 29	19 90	9 21	22 36
Haldimand	64	62	46	300	59	45	28 45	22 40	11 87	24 69
Welland	71	60	46	200	55	46	31 04	24 51	12 73	26 75
Group	67	67	45	258	68	42	29 43	25 45	11 90	29 50
Lambton	64	60	43	203	61	.....	30 21	30 42	13 02	30 98
Huron	71	74	45	375	71	60	31 95	29 98	13 27	36 87
Bruce	71	71	43	265	61	52	29 82	27 11	11 85	35 87
Group	69	70	44	278	66	56	30 75	29 09	12 71	35 00
Grey	66	68	43	369	66	45	28 97	23 80	10 68	30 90
Simcoe	68	69	44	300	66	45	29 11	21 31	11 54	26 24
Group	67	68	43	342	66	45	29 03	22 74	11 02	29 05
Middlesex	66	65	47	400	61	.....	35 45	32 95	16 74	35 18
Oxford	67	65	45	419	71	50	33 36	28 44	13 65	35 49
Brant	62	67	40	250	68	.....	34 73	24 03	11 64	32 92
Perth	67	75	46	182	64	.....	31 61	26 92	11 92	35 02
Wellington	62	67	42	230	65	38	34 98	25 50	14 03	41 56
Waterloo	62	62	43	367	55	55	33 48	32 01	12 78	41 74
Dufferin	61	64	39	400	56	48	28 07	22 64	10 71	31 62
Group	64	67	44	336	63	44	33 55	28 37	13 62	36 91
Lincoln	69	61	48	200	63	50	32 90	24 90	12 60	29 96
Wentworth	70	69	52	250	71	60	32 02	23 26	12 15	27 48
Halton	68	63	49	200	56	60	34 02	32 58	13 66	36 25
Peel	66	76	47	250	74	.....	35 09	25 03	17 31	38 00
York	72	76	46	184	73	70	35 81	26 24	14 80	34 85
Ontario	64	70	43	300	63	52	35 06	25 42	14 50	35 84
Durham	62	62	42	400	76	40	30 28	23 10	11 24	31 42
Northumberland	61	64	39	270	60	50	28 37	20 65	10 51	27 30
Prince Edward	64	62	42	215	60	50	25 34	18 92	10 79	21 73
Group	66	69	45	257	67	55	32 23	24 86	13 21	32 65
Lennox and Addington	61	50	41	316	66	33	22 87	20 30	11 34	20 56
Frontenac	61	60	42	341	58	50	26 25	19 80	9 98	23 29
Leeds	60	45	40	200	67	.....	27 67	21 78	8 90	23 44
Grenville	63	50	33	150	59	.....	25 68	19 52	10 57	21 47
Dundas	59	52	42	216	61	40	27 73	22 25	10 76	21 28
Stormont	59	65	37	150	50	.....	26 58	20 72	11 65	23 50
Glengarry	58	66	35	150	55	.....	26 23	20 82	11 09	22 46
Prescott	60	62	42	150	59	.....	26 07	19 88	10 33	23 21
Russell	72	71	43	217	71	50	26 89	19 59	12 82	24 59
Carleton	74	89	48	231	76	50	31 91	23 38	12 08	27 35
Renfrew	71	74	42	210	60	40	25 39	20 38	10 66	23 77
Lanark	63	64	42	175	55	35	28 41	22 58	11 47	28 13
Group	64	67	41	213	62	40	27 13	21 32	10 95	24 22
Victoria	64	58	42	393	55	52	27 56	21 84	11 46	29 48
Peterborough	62	56	40	150	61	38	26 37	18 90	10 32	23 83
Haliburton	64	71	33	140	46	33	23 81	18 22	8 46	17 87
Hastings	69	58	43	123	64	37	24 74	18 66	9 45	21 64
Group	66	59	41	199	59	38	25 56	19 84	10 23	24 41
Muskoka	79	75	45	256	61	43	26 92	20 28	9 29	23 10
Parry Sound	79	83	42	162	57	40	28 76	21 86	10 47	23 83
Nipissing	87	96	27	200	73	45	28 58	20 06	9 18	23 65
Algoma	88	94	43	247	69	55	28 36	22 06	11 15	25 70
Group	83	86	42	229	64	46	28 00	21 25	10 24	24 22
The Province	66	68	44	265	65	45	29 74	25 36	12 14	31 74

VALUES—LIVE STOCK PER HEAD.

TABLE VIII. Showing by County Municipalities and groups of Counties the value per head of Sheep, Hogs and Poultry in the Province for the year 1895, and also the value of each per head sold for the same period.

Counties.	Sheep.			Hogs.			Poultry.			
	Over 1 year.	Under 1 year.	Sold in year.	Over 1 year.	Under 1 year.	Sold in year.	Turkeys.	Geese.	Other fowls.	Sold in year.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	c.	c.	c.	c.
Essex	4 14	2 64	3 33	8 62	3 32	9 46	58	56	21	28
Kent	4 66	2 78	3 87	11 04	4 02	9 2	57	47	21	32
Elgin	4 40	2 82	3 74	13 02	3 96	8 50	54	49	20	33
Norfolk	3 76	2 62	3 60	11 00	4 15	8 26	63	54	21	35
Haldimand	4 84	2 84	3 93	11 62	4 09	8 52	74	60	23	33
Welland	4 49	2 82	3 56	12 70	4 29	8 30	70	64	24	34
Group	4 38	2 76	3 70	10 72	3 88	8 80	60	54	21	32
Lambton	4 62	2 78	3 57	11 21	4 03	7 63	63	53	21	29
Huron	4 86	3 03	3 75	12 24	3 90	8 44	61	51	19	37
Bruce	5 06	2 97	3 62	12 02	3 96	8 36	63	51	20	35
Group	4 89	2 95	3 66	11 88	3 96	8 21	62	51	20	34
Grey	4 45	2 74	3 36	11 49	4 11	8 58	60	52	21	32
Simcoe	4 60	2 72	3 47	11 43	4 06	8 06	66	58	23	36
Group	4 51	2 73	3 41	11 46	4 08	8 32	63	55	22	34
Middlesex	5 61	3 83	4 16	12 39	4 14	8 22	63	58	22	40
Oxford	4 79	2 97	4 27	13 33	4 24	8 21	69	58	22	37
Brant	5 76	3 75	4 64	12 61	4 36	8 19	62	57	23	36
Perth	4 76	2 92	3 64	11 95	4 43	8 49	67	49	20	32
Wellington	5 42	3 12	4 16	13 99	4 04	8 23	72	56	23	43
Waterloo	4 76	3 36	4 07	13 20	4 12	8 33	71	66	22	32
Dufferin	4 52	2 71	3 70	9 49	3 47	7 78	65	58	23	42
Group	5 17	3 25	4 07	12 53	4 14	8 24	66	56	22	38
Lincoln	4 81	3 20	3 88	13 38	4 02	7 72	78	70	24	35
Wentworth	5 22	3 11	3 93	12 12	4 02	8 22	72	62	25	33
Halton	5 30	3 10	4 58	13 88	3 85	7 86	76	59	24	41
Peel	4 77	2 69	3 95	14 31	3 59	8 33	68	53	23	39
York	5 09	3 02	4 02	13 81	3 72	8 23	70	60	24	42
Ontario	5 26	2 97	3 96	12 87	3 86	8 00	65	63	22	35
Durham	4 97	2 83	3 52	11 43	4 06	8 48	62	64	22	43
Northumberland	4 70	2 60	3 29	12 58	4 36	9 02	73	59	22	36
Prince Edward	3 65	2 40	3 17	12 11	4 38	8 76	61	50	21	30
Group	4 96	2 91	3 53	13 00	3 93	8 28	69	60	23	38
Lennox and Addington	4 11	2 56	3 20	12 22	4 02	10 28	67	53	23	31
Frontenac	3 97	2 50	3 25	12 33	4 75	11 82	59	62	24	31
Leeds	3 76	2 60	3 11	11 18	4 05	10 32	54	55	20	40
Grenville	3 83	2 62	3 39	10 98	3 91	10 17	63	52	22	39
Dundas	4 09	2 51	3 36	11 51	4 35	9 01	57	51	21	37
Stormont	4 12	2 69	3 28	12 16	5 15	10 01	62	60	23	32
Glengarry	4 10	2 59	2 99	10 91	3 98	11 09	66	58	23	26
Prescott	3 80	2 52	3 01	13 03	3 77	13 32	79	57	24	38
Russell	4 46	2 70	3 82	12 07	4 92	12 10	67	71	25	38
Carleton	4 29	2 81	3 39	13 03	4 02	11 81	78	57	25	44
Renfrew	3 95	2 46	2 88	11 89	4 06	11 19	70	58	24	41
Lanark	4 09	2 74	2 97	12 27	3 01	10 27	66	65	22	42
Group	4 04	2 60	3 18	11 96	4 05	10 86	66	58	24	37
Victoria	4 44	2 52	3 16	10 28	3 05	8 66	67	50	21	30
Peterborough	4 55	2 60	3 62	9 77	3 72	8 79	63	56	22	43
Haliburton	3 91	2 21	3 15	10 45	3 10	7 68	52	61	21	23
Hastings	3 66	2 35	3 24	12 49	4 17	8 66	68	55	23	35
Group	4 14	2 46	3 30	11 26	3 68	8 66	65	54	22	36
Muskoka	4 99	2 92	3 76	11 74	3 78	7 90	74	74	26	35
Parry Sound	4 97	2 79	3 73	11 91	3 86	8 00	80	61	22	32
Nipissing	3 85	2 32	4 99	10 00	4 25	10 35	68	52	27	42
Algoma	4 48	2 35	3 47	11 31	3 49	9 69	70	70	23	31
Group	4 74	2 64	3 69	11 37	3 71	8 77	73	67	24	34
The Province	4 62	2 85	3 64	11 87	3 98	8 68	65	56	22	36

MARKET

TABLE IX. Showing the average price of Agricultural Products at the leading markets of

Products.	Barrie.	Belleville.	Brampton.	Brantford.	Brockville.	Chatham.	Essex.	Goderich.	Guelph.	Hamilton.	Kingston.	Lindsay.	London.	Orangeville.
	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.
FALL WHEAT: per bush.														
July	80.0	84.7	83.5	78.8	88.2	75.4	70.0	81.3	80.8	83.8	79.5	88.8	81.0	76.5
August	66.5	77.0	...	69.5	78.9	67.9	63 8	71.4	72.5	71.4	74.8	75.0	69 1	74.6
September	53.9	62 5	60.5	58.1	71.0	56.1	53.3	61.0	58.6	60.1	62.4	62.1	57.9	58.5
October	62.8	62 3	65.0	63.2	67.1	61.3	58.0	60.0	64.5	63.1	67.3	62.8	61.1	59.5
November	67.3	63.4	67.0	70.2	69.3	....	65.0	64.0	65.0	67.9	68.6	67.8	67.1	64.4
December	62.9	65.8	62.8	64.5	71.9	...	60.0	64.0	65.0	64.9	68.5	62.3	61.9	64 8
Average { 1895	66.0	69.8	68.9	67.4	74.8	66.4	61.9	67.1	68.1	68.7	69.0	70.0	66.7	66.2
Average { 1894	53.4	52.8	52.5	52.3	63.0	51.5	50.5	51.3	54.1	53.1	59.4	57.7	54.4	53.1
SPRING WHEAT: per bush														
July	.....	84.7	83.5	79.5	91.6	75.1	....	.....	72.0	83.9	82.5	88.8	81.0	76.5
August	.....	73.5	...	69.1	83.5	70.0	....	.....	65.0	74.0	77.3	75.5	70.1	74.6
September	.....	61.0	60.5	59.3	75 8	53.5	....	.....	55.1	59.0	63.9	61.3	57.9	58.8
October	.....	61.3	64.0	63.8	72.5	60.5	....	.....	55.1	61.5	68.8	61.3	61.1	59.3
November	.....	63.4	66.6	70.5	72 5	....	....	....	55.0	.....	.....	67.3	67.0	64.3
December	.....	65.8	62.8	64.4	71.6	....	....	.....	55.0	.....	.....	63.0	63.0	65.5
Average { 1895	.....	68.6	68.6	68.4	78 3	67.2	....	.....	60.3	68.9	71.4	69.8	67.0	66.2
Average { 1894	53.4	53.1	49.1	52.5	65.0	49.8	....	54.0	52.1	53.5	61.9	56.0	55.1	52.8
BARLEY: per bush.														
July	42.5	46 4	48.0	49.4	50.9	40.7	.. .	.....	42.8	44.1	46.6	45.8	47.5	42.5
August	35.8	47.5	.....	45.0	50.0	34.1	....	.....	43.7	45 2	41.0	43.9	43.8	40.0
September	36.0	41.5	.....	38.6	45.0	32.0	....	.....	42.4	39.1	39.6	36.0	36.4	36.3
October	30.8	36.8	34.5	37 2	41.6	33.2	...	.....	40.1	39.3	39.1	33.4	34.7	34.3
November	31.6	34.8	36.5	37.5	39.0	....	....	.....	40.5	39.0	35.5	33.0	33.8	33.5
December	32.5	36.7	36.5	35.3	39.0	....	....	.....	39.8	39 0	35.5	33.5	33.5	36.4
Average { 1895	35.0	41.1	39 3	41.2	44.5	35.7	....	.....	41.8	41.3	40.3	37 9	39.2	37.1
Average { 1894	38.0	41.9	40.3	38.6	42.0	38 0	...	37.5	41.7	42.0	41.1	36.2	40 8	36 6
OATS: per bush.														
July	33.5	38.9	37.0	38.8	41.6	30 7	30.0	34.5	35.3	39 8	37 2	34 5	36.2	31.5
August	28.5	36.0	....	31.8	41.0	26.6	25.9	31.1	33.1	33.0	30 1	30 6	30.7	30.9
September	21.0	26.6	24.0	25.3	35.3	21.9	21.0	24.5	25.6	28.4	23.1	26.0	25.7	22.5
October	22.0	25.1	24.5	25.4	31.6	21.0	21.0	24 0	24.5	26.4	24.8	24.0	24.7	25.9
November	22.8	25.3	25.1	26.6	30.0	....	20.5	25.0	25.3	27.0	25.8	24.8	24.6	22 5
December	21.5	27.5	25.5	26.5	31.0	....	20.8	24.3	25 5	26 9	24.3	23.8	23.6	22.5
Average { 1895	25.0	30.5	27.8	29.5	35 4	25.8	23.8	27.4	28.7	30.7	27.7	27.4	28.3	26.0
Average { 1894	30.6	29.9	28.3	31.4	35.4	28 2	26.5	28.3	30.5	33.2	29.8	28.9	31.2	27.6
RYE: per bush.														
July	45.0	50.0	.....	56.0	59.3	....	....	.....	47.5	48.0	50.0	40.0	51 6	...
August	45.0	50.0	.....	51.3	60.0	....	....	.....	47.5	48 0	46.9	40.0	56 9	.....
September	38.3	45.0	.....	43.0	56.7	..	....	.....	47.5	50.0	45.5	40.0	56 2	.....
October	41.1	44.3	...	43.4	53.8	42.5	...	.....	47.5	50.0	44.3	38.5	50.8	....
November	42.1	44.0	.....	43 3	50.6	....	....	.....	43.8	50.0	43.5	38.0	49.9	.....
December	41.8	44.0	.....	43.3	50.0	....	....	.....	42.5	50.0	43.5	36.0	41.0	42.5
Average { 1895	42.2	45.8	.....	46.8	54.9	42.5	....	.....	46.2	49.3	45.5	38.8	52.0	42.5
Average { 1894	39.5	40.4	.....	42.6	50.0	....	45.0	.....	48 1	.....	43.0	40.0	51.5	39.0
PEAS: per bush.														
July	57.6	48.1	61.0	60.1	61.0	73.8	....	54.0	61 6	63.1	59.2	57.5	66.8	56.5
August	50.0	49.5	.....	55.2	60.0	48.8	....	52.4	61.2	60.4	58.3	57.0	64.4	56.3
September	46.5	51.8	49.0	50.4	60.0	49.2	....	49.5	53.5	51.8	52.5	54.4	54.0	48.8
October	48.7	50.9	49.0	47.9	58.8	45.8	....	48.5	49.3	50.1	51.2	55.0	51.1	48.5
November	51.0	53.6	49.9	49.8	55.0	....	....	50.0	49.8	50.0	52.0	55.0	50.2	50.3
December	50.5	52.5	48.5	48.8	47.5	....	....	49.6	52.0	50.0	52.0	55.0	50.0	49.5
Average { 1895	51.0	50.7	52.0	52.5	57.0	56.6	....	50.8	55.2	54.9	54.3	55.7	57.4	51.5
Average { 1894	52.5	52.2	51.8	50.4	57.5	51.1	....	51.8	55.0	54.3	54.5	53.1	52.6	50.3

PRICES.

Ontario for July-December, 1895, and the average for the half year and the Province.

Ottawa.	Owen Sound.	Pembroke.	Perth.	Peterborough.	Port Hope.	Ridgetown.	St. Catharines	St. Thomas.	Simcoe.	Stratford.	Toronto.	Walkerton.	Waterloo.	Whitby.	Woodstock.	The Province.	
																1895.	1894.
cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.
85.3	79.3	98.5	90.0	83.7	90.0	80.9	79.3	75.8	82.5	80.0	82.9	97.5	80.5	87.5	85.0	82.5	58.3
80.9	69.4	94.8	90.0	78.6	82.5	70.3	71.4	66.8	69.3	69.0	75.7	....	74.0	83.3	85.0	73.8	55.8
65.8	63.3	83.3	90.0	63.3	60.8	52.1	58.3	57.1	58.0	58.3	62.9	....	60.0	60.0	80.0	61.5	53.5
63.1	63.3	75.0	88.3	61.9	59.0	48.5	62.3	61.2	63.2	61.6	67.6	62.5	60.0	60.0	63.5	63.6	52.1
62.5	66.3	73.8	81.7	67.4	64.0	64.7	....	66.3	66.5	66.5	72.5	66.0	65.0	62.0	67.8	67.6	53.6
70.0	71.0	70.9	70.0	65.9	....	60.6	....	60.6	64.0	62.0	69.5	66.0	63.0	.....	67.0	65.4	57.1
71.2	68.3	81.7	84.5	69.6	72.0	64.3	67.7	65.0	67.0	66.2	71.8	75.9	67.1	73.1	74.4	69.3	....
58.7	59.0	62.8	60.0	56.9	59.4	....	52.8	51.6	51.2	52.2	56.0	52.9	52.5	53.6	56.0	....	55.0
83.8	80.7	95.1	90.0	84.2	87.5	....	90.0	.....	....	.....	96.0	97.5	80.0	100.0	.....	84.2	58.5
78.6	69.4	91.8	90.0	73.6	78.5	.....	.....	.....	....	.....	.....	.....	70.0	83.3	.....	74.6	56.7
68.8	62.8	83.3	90.0	63.5	60.0	.....	....	.....	.....	.....	.....	....	60.0	57.0	.....	62.8	54.2
62.5	61.6	75.0	81.7	62.1	57.5	....	63.0	....	.....	....	....	61.0	60.0	57.0	....	62.8	52.7
62.5	63.6	73.8	75.0	67.4	63.3	....	....	....	....	....	....	62.1	65.0	....	.....	66.4	53.7
70.0	65.5	70.0	70.0	65.9	....	.....	.....	....	.....	.....	....	62.5	63.0	....	.....	65.1	56.9
70.7	66.7	80.7	82.5	69.8	69.9	.....	72.0	....	.....	.....	96.0	73.8	65.7	77.8	.....	69.8	..
57.5	57.3	62.8	60.0	57.3	60.2	....	52.9	....	51.2	....	60.5	52.3	52.5	53.6	....	.....	55.5
	46.7	35.0	45.0	41.5	47.5	..	52.5	50.0	50.0	42.5	48.5	42.5	49.3	47.5	50.0	45.9	40.7
59.5	45.0	35.0	45.0	38.8	47.5	..	56.0	50.0	45.0	42.5	47.4	....	50.0	47.5	50.0	44.5	40.6
47.5	43.8	35.0	45.0	38.3	47.5	....	52.5	43.3	..	35.0	40.3	....	37.5	.....	50.0	40.2	40.3
43.5	34.9	35.0	38.3	36.3	41.5	..	49.2	36.5	33.3	33.5	37.8	30.0	35.5	....	43.8	37.4	40.8
.....	34.1	37.0	38.3	36.0	40.0	.....	....	34.5	34.5	34.3	39.9	30.0	35.0	35.0	35.9	35.9	40.2
.....	37.5	39.0	40.0	37.5	....	....	....	34.5	32.5	33.9	38.8	30.0	35.0	.....	34.5	36.2	40.3
47.2	40.1	36.0	42.0	38.2	45.3	..	51.4	42.0	39.1	36.1	42.1	34.2	40.6	44.5	43.7	40.4	..
46.2	42.0	35.0	45.0	38.5	44.4	..	45.6	47.5	44.3	38.7	42.4	37.2	39.4	36.8	38.5	....	40.5
47.2	37.8	44.5	35.0	35.7	39.0	32.3	41.7	37.3	38.5	32.9	38.8	36.0	35.9	36.5	37.5	36.8	37.1
38.2	36.3	42.7	34.2	35.7	39.0	33.1	35.0	32.2	35.0	28.9	34.4	..	34.8	36.5	37.5	33.4	33.2
29.8	29.0	32.5	26.7	31.4	26.9	23.8	28.9	25.3	23.5	23.5	29.8	..	27.5	27.5	34.1	26.5	29.1
28.4	25.3	25.5	25.0	26.6	26.6	26.1	25.5	23.3	23.0	22.8	28.2	23.3	25.5	27.5	24.5	25.4	28.8
29.0	25.8	26.5	25.0	25.6	26.5	23.5	..	22.8	24.0	23.0	28.4	24.5	25.0	24.0	24.1	25.3	28.3
29.8	26.5	25.5	27.5	25.0	..	26.4	..	21.3	24.0	23.0	27.5	24.5	25.0	..	24.0	25.1	28.8
33.5	29.8	32.4	29.2	30.8	32.3	27.1	32.9	27.6	27.5	25.7	31.2	28.2	29.1	31.6	30.1	29.1	..
35.5	30.7	34.1	29.6	30.2	33.3	..	34.1	28.7	32.4	29.5	32.8	28.8	31.1	28.9	30.6	..	30.8
..	40.0	42.0	40.0	38.0	46.5	..	..	53.0	60.0	....	..	46.0	....	50.0	..	47.7	..
...	40.0	44.2	40.0	38.8	46.5	....	....	....	51.7	....	..	..	..	50.0	..	47.7	..
....	40.0	48.5	40.0	34.5	51.8	....	....	....	40.0	....	..	..	..	..	..	45.6	..
..	40.0	44.9	38.3	40.8	51.5	..	..	..	41.8	....	45.7	46.0	..	..	..	46.4	46.2
....	40.0	40.8	38.3	43.3	51.5	..	..	..	43.0	....	45.2	46.0	..	..	..	44.2	44.5
..	40.0	39.0	40.0	42.3	....	....	....	....	43.0	....	46.5	46.0	..	..	..	43.2	43.8
..	40.0	43.1	39.5	39.6	49.4	....	..	53.0	46.2	....	45.9	46.0	..	50.0	..	45.6	..
	40.0	38.1	40.0	40.3	61.8	..	.....	53.0	41.6	..	50.0	..	..	39.8	..	..	44.2
76.3	59.5	57.5	55.0	60.7	62.5	..	58.5	60.0	60.0	58.0	64.3	59.0	61.1	60.0	65.0	60.7	56.3
67.0	57.5	55.8	53.3	61.5	62.5	..	57.1	60.0	55.0	53.0	63.1	..	60.0	60.0	65.0	58.9	55.4
64.6	50.8	52.5	50.0	57.3	60.9	..	61.3	57.5	48.5	49.0	54.3	..	60.0	60.0	65.0	53.8	53.8
58.1	50.1	50.1	50.0	55.7	56.0	..	51.4	47.5	46.2	47.9	52.0	47.8	48.3	60.0	65.0	51.4	52.1
53.3	50.0	48.5	50.0	55.5	56.0	..	..	48.8	46.0	50.0	48.8	49.2	60.0	1.	59.4	51.9	51.7
55.0	51.5	48.5	51.0	56.1	..	..	..	45.0	45.5	50.8	54.6	50.0	60.0	..	50.5	50.6	52.5
62.2	53.0	52.0	51.7	58.2	60.0	.....	56.8	53.5	49.9	51.3	57.9	52.4	73.3	60.0	61.6	54.8	..
63.0	51.3	47.4	50.8	55.4	55.9	..	52.7	51.1	49.7	50.9	59.4	51.3	53.0	58.3	56.2	..	53.6

MARKET

TABLE IX. Showing the average price

Products.	Barrie.	Belleville.	Brampton.	Brantford.	Brockville.	Chatham.	Essex.	Goderich.	Guelph.	Hamilton.	Kingston.	Lindsay.	London.	Orangeville.
	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.
CORN: (in ear) per bush.														
October	.....	.....	.....	24.2	25.6	16.6	.....	.....	.....	24.8	26.3	.....	25.2	.....
November	.....	.....	.....	23.0	24 4	.....	15.0	.....	.....	.....	.....	.....	23.8	.....
December	.....	.....	.....	21.3	24.6	.....	15.3	.....	.....	.....	.....	.....	23.8	.....
Average.... 1895	.....	.....	.....	23.2	24.9	16.6	15.2	.....	.....	24 8	26.3	.....	24.3	.....
Average.... 1894	.....	30.0	.....	24 0	27.5	20.8	22.7	.....	.....	30.1	29.7	.....	25.9	.....
BUCKWHEAT: per bush.														
October	35.3	38.6	.....	35.4	39.0	38.3	.....	.....	.....	.....	36.5	32.5	33.8	.....
November	31.4	34.5	.....	35 0	35.5	.....	.....	.....	.....	.....	37.5	31.4	34.8	.....
December	30.5	34.0	.....	34.3	36.1	.....	.....	.....	.....	.....	33.3	31.0	80.1	.....
Average.... 1895	32.7	35.9	.....	34.9	36 9	38 3	.....	.....	.....	.....	35.8	31.7	33.0	.....
Average.... 1894	.....	41.3	.....	37.6	44.0	.....	.....	.....	.....	.....	37.2	35.5	35.4	.....
BEANS: per bush.														
October	.....	.....	.....	122.5	.....	95.0	.....	.....	.....	.....	.....	.....	73.5	.....
November	.....	.....	.....	122.5	.....	.....	.....	.....	.....	.....	.....	.....	67.0	.....
December	.....	.....	.....	122.5	.....	.....	.....	.....	.....	.....	.....	.....	65.0	.....
Average.... 1895	.....	.....	.....	122.5	.....	95 0	.....	.....	.....	.....	.....	.....	68.9	.....
Average.... 1894	.....	.....	.....	112.5	.....	109 6	.....	.....	.....	.....	.....	.....	87.5	.....
POTATOES: per bush.														
October	13.0	28.0	18.5	26.4	32.1	24.0	35.0	27.5	19.6	22.7	23.8	19.4	17.8	12.2
November	10.0	26.8	18.4	21.6	23.1	.....	30.0	17.5	18.3	15.8	21.8	17.5	16.8	9.3
December	9.8	26.7	16.8	21.8	23.5	.....	35.0	17.5	22.3	20.4	20.8	17.5	16.8	8.8
Average.... 1895	11.1	27.4	17.8	24.1	26.3	24.0	33.6	20.8	19.8	20.6	22.7	18.2	17.3	10.2
Average.... 1894	24.0	36.9	32.6	42.4	40.0	36.5	35.7	38.3	29.4	39.0	34.6	31.0	38.5	25.2
WOOL: per pound.														
July	18.5	17.4	16.0	17.0	20.0	21.9	.....	.....	20.3	20.2	19.6	19.0	21.6	19.0
August	18.5	18.2	.....	17.9	20.0	22.8	.....	.....	20.4	20 3	19.9	19.0	21.6	19.0
September	18.5	19.0	16.0	17.0	20.0	23.5	.....	.....	20.4	20.6	20.5	19.0	21.4	20.5
October	22.0	19.5	16 0	17.0	20.0	22.0	.....	.....	20.5	20.5	20.5	19.0	22.0	21.0
November	22.0	19.0	16.0	.....	20 0	.....	.....	.....	20 5	.....	18.5	19.0	22.5	21.0
December	21.3	19.0	16.0	.....	20.0	.....	.....	.....	20.5	.....	18.0	19.0	22.5	21.0
Average.... 1895	20.2	18.6	16.0	17.2	20.0	22.3	.....	.....	20.4	20.4	20.0	19.0	21.8	20.3
Average.... 1894	16.0	16.6	14 0	17.5	19.0	17.3	.....	18.8	17.7	16.6	13.3	.....	16 3	16.0
HAY: per ton.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$. c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
July	11 40	8 86	14 00	13 06	11 00	8 56	7 50	12 13	11 63	14 09	11 60	8 00	11 75	11 00
August	9 00	9 60	.....	12 72	11 00	8 61	7 50	11 50	11 53	14 89	11 38	8 20	12 06	12 50
September	10 00	12 30	14 00	13 63	11 00	9 17	7 50	12 00	14 34	15 28	13 38	9 38	12 75	10 50
October	11 00	14 00	14 00	13 33	11 00	9 50	7 50	13 50	14 18	15 28	11 90	10 75	13 08	12 60
November	11 75	15 00	14 00	14 50	11 00	.....	7 50	13 50	14 56	15 75	11 13	11 00	13 38	13 88
December	11 75	15 67	14 00	14 75	11 00	.....	8 50	13 50	15 69	17 60	13 38	11 00	13 13	12 50
Average.... 1895	10 92	12 20	14 00	13 48	11 00	8 88	7 71	12 64	13 35	15 29	12 02	9 66	12 58	12 18
Average.... 1894	6 85	7 38	7 08	7 25	9 00	6 32	5 98	6 75	8 03	8 21	7 80	7 14	8 34	.....

PRICES.—*Continued.*

of Agricultural Products, etc.—*Continued.*

Ottawa.	Owen Sound.	Pembroke.	Perth.	Peterborough.	Port Hope.	Ridgetown.	St. Catharines.	St. Thomas.	Simcoe.	Stratford.	Toronto.	Walkerton.	Waterloo.	Whitby.	Woodstock.	The Province. 1895.	The Province. 1894.
cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.	cts.
29.5	....	.....	.....	.....	.....	25.0	23.2	25.0	18.5	.....	.....	.....	.....	.....	.....	24.1	26.5
.....	.....	.....	.....	.....	.....	25.0	.....	21.9	16.5	.....	.....	.....	.....	.....	.....	21.8	26.3
.....	.....	.....	.....	.....	.....	.....	.....	18.8	17.0	.....	.....	.....	.....	.....	.....	20.1	25.5
29.5	...	.....	.....	.....	.....	25.0	23.2	21.9	17.4	.....	.....	.....	.....	...	.....	22.6	.....
33.5	.....	.....	.....	35.3	.....	.....	25.7	23.7	21.1	.....	.....	.....	.....	25 0	...	....	26.1
40.0	55.0	.....	36.0	36.2	45.5	.....	.....	.....	33.7	....	44.0	37.5	...	.....	.....	38 0	41.2
40.5	55.0	.....	34.0	35.5	38.8	.....	.....	.....	32.0	.....	39.3	37.5	.....	35.0	.....	36.9	39.5
40.0	55.0	.....	33.0	33.5	.....	.....	.....	.....	31.5	.....	37.3	37 5	.....	.....	.....	35 4	37 4
40.2	55.0	.....	34.2	35.0	43 7	.....	...	.....	32.3	.....	38 9	37.5	.....	35 0	....	36.8	..
49.7	38.6	....	35.8	39.3	48.8	...	.....	.....	36.8	.....	43.6	....	.....	36.5	..	.....	39.2
.....	....	110 0	....	.....	.....	85.8	.....	.....	85.0	...	105.0	...	.....	...	.....	96.0	112.0
.....	.....	95.0	.....	.....	.....	77.5	.....	.....	82.5	.....	110.0	....	.....	.....	.....	94 3	112.3
.....	.....	117.5	.....	.....	.....	71.9	...	...	67.5	....	115.0	....	.....	...	...	93 3	105.6
...	.....	107.7	.....	...	.....	79.2	...	....	78.8	...	109.6	....	.....	.....	...	94.7	...
.....	.....	105.0	.....	.....	.....	.....	.....	....	112.4	....	.....	.....	.....	85.9	.....	...	110.4
22.6	22.4	30.5	20 5	23.8	21.4	16.0	20.0	25.4	15.4	21.4	18.0	23.5	20 6	27.0	.....	21 9	37.8
23.0	22 5	24.4	21.3	21.8	18.5	15 7	.....	18.3	11.8	18 8	16.6	23.3	20.0	13.5	16.5	18.9	34.2
23.5	17 5	22.5	22.5	19.3	.....	13.3	.....	18.4	13.3	18 3	16.5	23.5	17.5	.....	20.0	19.0	34.1
22.9	20.8	26.2	21.6	21.9	20 6	15.0	20.0	20.9	13.6	19.6	17.1	23.4	19.5	18.0	18.8	20.2	...
35 3	26.8	35.1	29.5	35.0	36 2	.....	31.5	46 5	25 3	46 5	35.2	33.8	31.4	33.5	57.6	...	35.4
18.8	20.0	18 0	19.5	21.0	19 0	21.5	19 0	.....	.....	18.0	21.6	17.5	...	...	...	19.6	16.8
18.4	20.0	18.7	19.5	21.2	19 0	21.5	19.4	.....	.....	18.0	22.2	...	...	...	...	20.0	16.7
18.8	20 0	20.0	20 0	21.6	19 0	.....	19.5	.....	.....	18.0	22 9	...	...	...	...	20.1	16.9
18.9	20.0	20.0	20.0	21.7	19 0	.....	19.6	...	.....	18.0	23.1	17 0	...	...	...	20.2	17.0
....	20.0	20.0	19 3	21.5	19 0	.....	.....	...	...	...	23.1	17.0	...	...	.....	20.0	16.9
...	20.0	22 0	20.0	21 5	...	...	...	...	...	...	22 8	17.0	...	...	...	20.4	16.9
18 7	20 0	19.8	19.7	21.4	19.0	21 7	19.4	...	.....	18 0	22.6	17.2	...	...	...	20 0	...
18 3	16 7	18.1	16.5	16.4	19 0	...	17.5	...	....	16 5	18.9	..	...	15.9	...	...	16 9
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
8 25	17 67	8 25	8 00	12 30	9 25	8 00	11 88	12 83	13 00	11 13	13 94	....	13 63	7 50	11 25	11 23	7 47
8 00	13 13	8 53	9 00	12 22	11 00	7 63	12 05	12 00	12 00	11 90	14 78	....	15 00	7 50	12 00	11 43	7 26
9 06	13 50	8 67	9 00	12 94	11 38	8 94	13 38	12 40	12 00	14 75	16 22	...	15 50	10 50	12 25	12 31	7 54
9 28	17 63	9 05	8 83	13 91	11 30	9 40	12 90	12 40	12 30	14 00	16 18	....	15 50	10 50	13 13	12 75	7 62
11 17	18 00	9 88	9 33	11 75	11 00	9 50	..	12 75	12 50	14 50	18 03	....	15 50	....	13 50	13 31	7 83
12 00	17 00	10 88	11 00	13 13	.....	10 38	...	12 60	13 00	12 50	16 69	....	15 50	...	13 50	13 40	7 66
9 27	16 08	9 25	9 23	12 79	10 80	8 97	12 54	12 50	12 48	13 12	15 93	...	15 21	8 79	12 64	12 30	...
6 82	18 02	6 70	6 54	7 91	7 94	....	6 83	8 33	7 14	6 96	8 35	7 31	8 23	7 29	10 60	...	7 56

VALUES—FALL AND SPRING WHEAT.

TABLE X. Showing by County Municipalities and groups of Counties the value at market prices of the total crops of Fall and Spring Wheat in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years, 1882-95.

Counties.	Fall Wheat.			Spring Wheat.		
	1895.	1894.	1882-95.	1895.	1894.	1882-95.
	$	$	$	$	$	$
Essex	385,758	241,281	521,040	3,664	2,239	17,460
Kent	719,957	635,148	993,240	8,361	2,412	39,327
Elgin	446,793	419,447	726,851	931	3,084	16,043
Norfolk	233,959	332,070	513,253	172	61	8,152
Haldimand	346,300	386,414	458,197	3,364	5,364	31,671
Welland	169,942	172,657	293,000	793	2,246	11,720
Totals	2,302,709	2,187,017	3,505,581	17,285	15,406	124,373
Lambton	547,581	360,486	593,414	10,251	4,228	62,542
Huron	673,397	564,278	1,040,438	29,555	21,778	162,921
Bruce	356,978	330,876	700,544	47,689	39,004	142,791
Totals	1,577,956	1,255,640	2,334,396	87,495	65,010	368,254
Grey	246,992	203,083	404,995	121,076	80,227	398,981
Simcoe	863,710	580,523	939,094	142,284	117,667	396,674
Totals	1,110,702	783,606	1,344,089	263,360	197,894	795,655
Middlesex	934,107	624,350	1,224,940	6,584	6,726	95,429
Oxford	408,671	511,379	677,618	9,948	4,035	94,076
Brant	180,908	365,132	453,110	735		12,123
Perth	523,611	430,604	715,105	35,178	19,566	132,512
Wellington	145,697	156,483	360,062	173,814	121,145	261,609
Waterloo	359,407	451,461	669,622	5,405	5,767	50,979
Dufferin	68,660	55,985	138,314	147,323	88,890	243,022
Totals	2,621,061	2,595,344	4,238,771	378 987	246,059	889,750
Lincoln	194,576	185,769	314,897	4,999	863	21,088
Wentworth	304,425	338,269	462,146	3,041	482	30,022
Halton	276,463	294,061	350,815	5,971	6,308	46,214
Peel	269,567	317,264	435,368	50,454	34,769	178,712
York	392,587	389,459	632,157	132,392	76,523	332,586
Ontario	116,765	96,304	156,162	199,218	165,917	594,869
Durham	80,181	67,247	71,236	106,252	79,570	421,057
Northumberland	146,951	161,516	202,283	91,381	72,662	278 383
Prince Edward	46,058	54,346	49,059	14,253	13,398	61,781
Totals	1,827,673	1,904,235	2,674,123	607,961	450,492	1,964,706
Lennox and Addington	35,619	46,408	39,690	33,607	31,729	62 200
Frontenac	9,395	5,737	21,980	51,307	41,455	101,714
Leeds	20,937	27,565	65,536	41,943	37,416	152,661
Grenville	388	935		19,582	16,503	
Dundas	4,364	2,574	14 005	30,095	22,133	63,898
Stormont	3,410	740	7,379	21,240	16,727	59,513
Glengarry	1,077	795	6,123	46,492	35,358	98,060
Prescott	407	385	677	47,225	27,401	100,614
Russell	470	451	2,438	9,620	11,796	49,743
Carleton	2,465	4,147	15,052	119,424	118,349	305,805
Renfrew	4,026	4,431	11,860	236,499	176,462	332,585
Lanark	30,315	23,651	43,693	103,617	87,308	176,492
Totals	122,873	117,819	228,433	760,651	622,637	1 503,285
Victoria	58,755	38,450	106.902	116,584	112,456	367,610
Peterborough	78,692	84,983	146,077	80,439	68,249	262,860
Haliburton	1,488	928	1,707	7,245	5,258	14,579
Hastings	98,338	105,800	152,583	60,126	45,969	159,767
Totals	237,273	230,161	407,269	264,394	231,932	804,816
Muskoka	177	148	742	4,519	5,579	14,772
Parry Sound	508	1,276	739	2,952	3,672	15,620
Nipissing	263	264	69	5,148	3,386	1,754
Algoma	8,415	6,148	8,496	31,083	27,092	87,977
Totals	9,363	7,836	10,046	43,702	39,729	120,123
The Province	9,809,610	9,081,658	14,742,708	2,423,835	1,869,159	6,570,962

VALUES—BARLEY AND OATS.

TABLE XI. Showing by County Municipalities and groups of Counties the value at market prices of the total crops of Barley and Oats in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years, 1882-95.

Counties.	Barley.			Oats.		
	1895.	1894.	1882-95.	1895.	1894.	1882-95.
	$	$	$	$	$	$
Essex	45,420	46,615	45,441	641,134	476,432	435,211
Kent	117,897	98,333	96,870	571,713	536,420	479,539
Elgin	83,352	48,881	68,049	454,181	404,164	423,451
Norfolk	24,676	22,644	66,963	268,391	206,837	287,499
Haldimand	41,133	35,759	130,521	288,465	229,995	256,464
Welland	5,282	7,693	38,369	244,321	160,068	207,111
Totals	317,760	259,925	446,153	2,468,205	2,013,916	2,089,275
Lambton	142,107	112,322	176,138	897,983	708,077	563,720
Huron	251,593	191,901	348,258	1,494,262	1,130,628	1,105,268
Bruce	120,022	135,142	222,297	975,682	949,318	776,596
Totals	513,722	439,365	746,693	3,367,927	2,788,023	2,445,584
Grey	147,554	151,864	251,279	1,283,663	1,362,479	1,109,940
Simcoe	473,134	300,136	407,470	1,295,308	1,093,148	878,975
Totals	620,688	452,000	658,749	2,578,971	2,455,627	1,988,915
Middlesex	251,479	135,122	201,006	1,205,226	905,502	989,561
Oxford	149,396	116,531	232,272	859,609	751,256	742,231
Brant	80,874	93,138	223,051	209,219	203,400	227,456
Perth	224,500	129,243	244,465	1,235,849	881,806	898,133
Wellington	286,509	282,476	403,564	1,263,374	1,198,089	1,016,623
Waterloo	144,847	158,102	248,633	534,345	502,106	507,047
Dufferin	123,164	120,001	149,636	597,437	630,299	434,975
Totals	1,260,769	1,034,613	1,765,627	5,905,059	5,072,458	4,816,026
Lincoln	7,333	12,903	45,643	204,249	169,360	203,096
Wentworth	48,790	65,212	158,407	369,766	275,625	354,453
Halton	63,833	43,267	155,734	264,509	228,441	248,947
Peel	232,766	242,391	438,765	454,227	461,003	423,401
York	310,453	305,352	730,817	1,022,862	1,024,153	954,059
Ontario	231,581	191,449	484,429	800,490	672,948	700,643
Durham	219,187	233,847	546,983	490,557	449,425	444,983
Northumberland	90,720	112,280	418,033	381,910	332,282	330,084
Prince Edward	132,371	156,810	370,443	135,168	130,125	134,053
Totals	1,337,034	1,360,007	3,329,244	4,123,747	3,743,362	3,793,729
Lennox and Addington	115,957	153,082	372,858	235,209	268,638	229,461
Frontenac	33,391	49,541	166,619	311,459	293,443	293,598
Leeds	40,457	41,692	122,632	342,167	359,785	725,546
Grenville	25,497	24,887		262,310	276,164	
Dundas	24,686	28,317	83,216	311,774	304,243	365,960
Stormont	25,454	19,691	53,236	238,187	201,067	286,328
Glengarry	26,006	18,791	25,955	334,477	248,889	347,994
Prescott	26,275	21,134	40,069	325,088	187,060	294,368
Russell	19,950	12,140	20,264	251,810	149,603	207,924
Carleton	87,030	64,247	117,206	808,470	632,744	774,452
Renfrew	9,164	13,150	16,611	400,992	368,240	467,825
Lanark	29,805	24,063	57,852	170,136	413,778	434,079
Total	462,367	467,485	1,076,528	4,537,104	3,703,654	4,394,863
Victoria	192,529	246,960	355,065	706,979	646,358	513,448
Peterborough	43,019	51,175	131,936	357,129	400,076	350,125
Haliburton	1,678	1,521	2,957	42,443	26,372	47,959
Hastings	112,439	108,349	305,819	432,844	472,505	445,641
Totals	349,665	408,005	795,777	1,539,972	1,551,310	1,357,175
Muskoka	6,715	7,293	6,472	98,264	75,374	95,192
Parry Sound	6,103	5,764	7,954	97,552	85,714	67,842
Nipissing	1,362	869	752	31,504	22,456	10,649
Algoma	8,479	9,747	9,209	99,287	101,241	71,507
Totals	22,659	23,673	24,387	326,607	284,785	245,190
The Province	4,884,465	4,447,064	8,843,144	21,646,992	21,613,135	21,130,757

VALUES—RYE AND PEAS.

TABLE XII. Showing by County Municipalities and groups of Counties the value at market prices of the total crops of Rye and Peas in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95.

Counties.	Rye.			Peas.		
	1895.	1894.	1882-95.	1895.	1894.	1882-95.
	$	$	$	$	$	$
Essex	22,991	12,732	10,063	44,605	28,380	38,347
Kent	19,737	9,253	9,868	28,285	26,146	90,898
Elgin	31,766	18,253	15,185	74,971	90,721	132,685
Norfolk	69,517	33,537	55,777	91,152	97,250	176,995
Haldimand	6,129	4,626	7,133	135,807	108,489	146,842
Welland	11,433	8,082	6,192	52,070	43,518	44,679
Totals	161,573	86,483	104,188	426,890	394,504	630,446
Lambton	10,539	4,182	2,992	97,248	65,550	98,641
Huron	5,689	3,748	3,478	544,881	471,367	481,718
Bruce	5,742	2,479	4,570	618,435	524,787	551,982
Totals	21,970	10,409	11,040	1,260,564	1,061,704	1,132,341
Grey	3,505	6,968	5,635	564,050	546,835	605,416
Simcoe	22,843	22,305	22,633	737,679	597,817	487,680
Totals	26,348	29,273	28,268	1,301,729	1,144,652	1,093,096
Middlesex	27,972	7,994	6,900	170,144	143,836	238,858
Oxford	24,179	13,426	11,622	178,583	145,306	200,016
Brant	29,966	4,438	10,315	102,997	100,388	115,793
Perth	9,794	4,913	2,416	411,200	281,343	329,250
Wellington	19,548	7,256	9,719	467,256	334,362	493,525
Waterloo	17,563	10,161	6,610	221,972	181,035	212,249
Dufferin	30,529	7,659	8,198	196,495	210,388	169,981
Totals	159,551	55,847	55,780	1,748,647	1,396,658	1,759,672
Lincoln	10,317	3,953	4,271	60,830	41,725	55,662
Wentworth	19,777	13,787	9,902	131,471	104,686	133,580
Halton	8,914	2,177	5,499	144,279	79,103	135,139
Peel	9,992	895	12,583	208,740	151,349	191,917
York	12,972	6,703	14,197	492,189	352,034	408,179
Ontario	42,804	25,937	25,397	295,357	301,497	346,356
Durham	53,655	30,852	39,069	336,708	317,918	294,687
Northumberland	64,378	76,434	82,181	276,909	337,591	247,294
Prince Edward	43,730	51,650	62,630	189,319	261,027	172,592
Totals	266,539	212,388	255,729	2,135,802	1,946,935	1,985,406
Lennox and Addington	19,638	21,621	34,817	99,733	91,095	102,125
Frontenac	11,683	14,975	31,304	96,965	82,349	114,726
Leeds	8,296	7,346	49,277	34,756	33,685	67,820
Grenville	20,107	4,170		14,979	15,043	
Dundas	10,054	6,475	14,520	15,930	8,945	19,551
Stormont	1,899	564	4,395	21,020	12,880	27,357
Glengarry	181	146	565	29,715	22,811	52,083
Prescott	.....	663	2,070	26,998	17,129	69,725
Russell	1,098	3,899	3,108	19,564	15,013	37,106
Carleton	15,875	33,163	48,739	114,299	76,216	153,019
Renfrew	33,779	32,563	68,670	227,289	234,312	257,512
Lanark	16,736	8,281	39,716	121,485	109,751	143,668
Totals	139,346	133,866	297,181	822,713	719,229	1,044,692
Victoria	8,323	7,191	11,123	220,088	199,289	213,380
Peterborough	22,884	17,348	29,453	170,933	225,941	189,281
Haliburton	2,120	477	2,226	17,285	18,361	19,345
Hastings	52,498	57,199	101,477	221,812	219,961	212,608
Totals	85,825	82,215	144,279	630,118	663,552	634,614
Muskoka	1,302	758	3,384	40,028	35,453	38,406
Parry Sound	777	901	3,585	46,203	43,167	27,321
Nipissing	509	219	372	17,028	16,456	5,335
Algoma	2,713	521	2,220	101,598	93,958	76,210
Totals	5,301	2,399	9,561	204,857	189,034	147,272
The Province	866,453	612,880	906,026	8,531,320	7,516,268	8,427,539

VALUES—CORN AND BUCKWHEAT.

TABLE XIII. Showing by County Municipalities and groups of Counties the value at market prices of the total crops of Corn (for husking and silo) and Buckwheat in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95.

Counties.	Corn.					Buckwheat.		
	Husking.	Silo.	Total.			1895.	1894.	1882-95.
			1895.	1894.	1882-95.			
	$	$	$	$	$	$	$	$
Essex	1,120,004	12,342	1,132,346	770,613	717,371	6,152	7,147	8,179
Kent	822,552	28,062	850,614	627,211	581,117	7,648	13,735	9,135
Elgin	493,339	63,338	556,677	467,295	334,921	19,737	19,030	13,916
Norfolk	386,092	92,018	478,110	287,825	270,328	63,229	53,374	39,464
Haldimand	49,588	48,024	97,612	40,056	39,645	6,545	6,814	5,238
Welland	162,160	30,618	192,778	145,447	120,575	17,790	19,378	15,457
Totals	3,033,735	274,402	3,308,137	2,338,447	2,063,957	121,101	119,478	91,389
Lambton	394,803	76,030	470,833	342,075	187,563	6,126	5,356	4,862
Huron	42,058	163,488	205,546	86,905	58,964	2,624	2,566	2,884
Bruce	9,507	97,030	106,537	50,799	27,589	2,778	997	3,215
Totals	446,368	336,548	782,916	479,779	274,116	11,528	8,919	10,961
Grey	10,756	119,694	130,450	63,720	29,889	10,550	5,355	4,319
Simcoe	38,269	71,512	109,781	88,780	38,794	50,428	33,640	11,067
Totals	49,025	191,206	240,231	152,500	68,683	60,978	38,995	15,386
Middlesex	424,939	205,852	630,791	448,102	277,761	12,687	17,405	5,766
Oxford	193,615	175,176	368,791	266,300	192,868	10,257	5,822	5,229
Brant	100,838	62,766	163,604	126,894	102,658	9,067	6,311	5,229
Perth	16,198	141,700	157,898	80,636	40,849	1,398	1,446	1,090
Wellington	7,293	109,494	116,787	42,373	29,060	5,151	664	1,948
Waterloo	20,211	50,486	70,697	48,333	33,108	246	619	1,011
Dufferin	2,735	9,576	12,311	13,470	3,908	6,597	2,517	1,474
Totals	765,829	755,050	1,520,879	1,026,408	680,212	44,783	34,784	21,747
Lincoln	129,862	36,450	166,312	118,819	121,499	2,770	4,802	5,908
Wentworth	58,682	113,864	172,546	99,103	109,888	6,275	7,753	7,171
Halton	22,239	71,650	93,889	49,649	33,715	2,517	3,003	1,438
Peel	7,068	63,048	71,016	48,068	23,797	1,760	2,211	1,820
York	18,974	145,396	164,370	82,660	49,314	21,647	20,281	5,413
Ontario	51,738	90,888	142,626	108,904	61,154	57,499	56,155	19,125
Durham	44,786	70,142	114,928	67,589	43,586	79,390	96,619	38,024
Northumberland	73,927	107,020	180,947	127,578	89,813	133,824	160,753	84,676
Prince Edward	117,004	66,982	183,986	129,439	101,320	59,009	82,460	72,453
Totals	525,180	765,440	1,290,620	832,704	637,286	364,688	434,007	235,028
Lennox & Addington	74,522	74,928	149,450	98,797	55,376	41,275	34,792	34,586
Frontenac	44,014	81,470	125,484	92,239	48,572	11,826	16,027	16,903
Leeds	135,576	116,642	252,218	237,485	192,907	28,182	18,703	47,359
Grenville	104,269	85,818	190,087	135,161		40,794	22,830	
Dundas	77,384	123,522	200,906	121,660	63,279	15,438	14,360	16,906
Stormont	51,815	56,592	108,405	107,375	45,758	19,810	18,201	20,316
Glengarry	33,558	107,568	141,126	83,773	40,187	15,677	11,214	10,817
Prescott	65,388	44,304	109,692	84,145	40,364	14,418	13,293	12,899
Russell	14,225	29,470	43,695	36,389	20,178	13,258	12,246	9,528
Carleton	25,328	122,562	147,890	129,369	57,393	48,589	33,107	32,389
Renfrew	9,463	43,304	53,367	38,092	17,243	21,010	21,012	13,157
Lanark	29,949	107,110	137,059	89,940	43,257	30,389	24,870	42,949
Totals	656,489	993,890	1,650,379	1,253,876	624,514	301,666	240,655	257,004
Victoria	5,378	26,402	31,780	19,507	13,637	29,164	31,914	14,964
Peterborough	6,756	41,866	48,622	36,071	15,093	30,836	19,855	12,904
Haliburton	1,880	960	2,840	1,663	1,866	4,960	1,939	2,442
Hastings	113,063	160,266	273,429	197,228	131,803	49,564	57,555	43,628
Totals	127,077	229,594	356,671	254,469	162,399	114,570	111,273	73,938
Muskoka	3,139	1,248	4,387	4,074	2,918	2,169	1,205	3,210
Parry Sound	1,265	1,840	3,105	2,708	1,681	2,421	1,014	1,209
Nipissing	456	416	872	345	263	1,352	1,231	963
Algoma	734	1,674	2,408	2,087	1,263	2,108	1,897	1,388
Totals	5,594	5,178	10,772	9,214	5,525	8,050	5,348	6,270
The Province	5,909,297	3,551,308	9,160,605	6,347,397	4,516,692	1,027,364	993,459	710,323

VALUES—BEANS AND POTATOES.

TABLE XIV. Showing by County Municipalities and groups of Counties the value at market prices of the total crops of Beans and Potatoes in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95.

Counties.	Beans.			Potatoes.		
	1895.	1894.	1882-95.	1895.	1894.	1882-95.
	$	$	$	$	$	$
Essex	13,837	20,376	14,983	79,647	68,638	114,876
Kent	830,891	495,490	356,609	110,477	93,106	166,802
Elgin	142,456	94,044	43,946	118,301	120,460	120,428
Norfolk	14,954	7,558	11,458	106,594	98,942	143,963
Haldimand	3,721	3,570	4,008	35,339	32,763	60,766
Welland	23,311	18,394	13,921	79,383	87,199	96,479
Totals	1,029,170	639,432	444,925	529,741	501,108	703,314
Lambton	58,057	33,817	13,537	119,746	78,045	122,216
Huron	4,382	4,414	3,052	176,378	204,519	261,773
Bruce	4,485	1,757	2,261	153,456	143,833	224,791
Totals	66,924	39,988	18,850	449,580	426,397	608,780
Grey	10,067	8,346	3,900	213,684	228,729	355,035
Simcoe	17,912	7,331	4,012	385,547	326,328	382,088
Totals	27,979	15,677	7,912	599,231	555,057	737,123
Middlesex	71,322	21,632	12,970	269,402	210,008	249,948
Oxford	5,064	8,045	6,146	114,266	121,716	149,724
Brant	4,897	800	6,027	66,201	81,013	102,488
Perth	4,451	2,065	1,466	165,349	161,501	182,818
Wellington	682	1,063	740	279,739	284,310	315,564
Waterloo	2,249	433	770	111,363	104,001	149,575
Dufferin	1,193	751	584	171,646	185,679	194,629
Totals	89,858	34,789	28,703	1,177,966	1,148,228	1,344,746
Lincoln	4,818	2,252	3,480	68,554	49,326	76,202
Wentworth	2,406	371	3,029	114,254	126,686	178,311
Halton	2,197	894	777	57,903	57,118	73,882
Peel	1,065	.....	1,136	120,599	139,912	135,669
York	10,359	9,787	4,471	350,990	274,468	340,094
Ontario	11,679	13,127	6,441	235,512	196,708	227,884
Durham	13,657	21,016	8,290	123,962	134,589	170,633
Northumberland	41,784	41,326	16,028	151,004	160,290	206,195
Prince Edward	10,040	15,341	9,660	56,561	64,090	90,183
Totals	98,005	104,114	53,312	1,279,339	1,203,187	1,499,053
Lennox and Addington	7,126	8,479	5,079	94,354	131,695	150,171
Frontenac	3,749	2,937	6,372	107,270	152,149	171,088
Leeds	4,030	4,830	8,433	128,695	172,161	355,918
Grenville	3,476	2,103		150,167	171,018	
Dundas	6,074	3,078	5,948	90,271	108,832	135,388
Stormont	3,798	2,222	4,427	59,369	69,895	98,843
Glengarry	4,853	2,716	4,082	72,856	74,356	109,861
Prescott	6,728	5,708	12,842	94,531	81,495	124,350
Russell	4,258	3,168	4,542	54,229	55,244	66,127
Carleton	15,252	8,071	10,941	186,012	269,284	319,290
Renfrew	9,512	8,887	11,419	130,768	183,104	241,993
Lanark	2,946	7,391	5,733	127,599	141,187	207,959
Totals	71,782	59,590	79,818	1,296,121	1,610,420	1,980,988
Victoria	7,292	3,949	2,700	121,004	109,830	170,261
Peterborough	2,804	3,892	2,599	121,596	111,026	142,527
Haliburton	817	569	596	30,627	20,512	39,029
Hastings	18,654	9,665	8,085	167,538	197,851	282,713
Totals	29,567	18,075	13,980	440,765	439,219	634,530
Muskoka	360	464	865	40,527	46,441	75,997
Parry Sound	443	729	436	54,216	62,613	58,993
Nipissing	142	287	225	26,142	18,868	12,327
Algoma	758	430	461	43,331	64,210	63,317
Totals	1,703	1,910	1,987	164,216	192,132	210,634
The Province	1,414,988	913,575	649,487	5,936,959	6,075,748	7,719,168

VALUES—MANGEL-WURZELS AND CARROTS.

TABEL XV. Showing by County Municipalities and groups of Counties the value of the total crops of Mangel-wurzels and Carrots in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95.

Counties.	Mangel-wurzels.			Carrots.		
	1895.	1894.	1882-95.	1895.	1894.	1882-95.
	$	$	$	$	$	
Essex	21,760	9,968	9,477	10,440	2,004	3,391
Kent	24,432	16,405	11,804	12,115	10,637	6,525
Elgin	32,408	22,344	12,967	19,881	17,670	8,554
Norfolk	17,394	7,883	8,042	14,104	9,979	6,658
Haldimand	6,448	2,946	4,633	4,489	1,358	2,888
Welland	4,916	1,817	4,583	3,559	1,748	2,943
Totals	107,358	61,363	51,506	64,588	43,396	30,959
Lambton	43,022	20,907	16,798	21,315	13,449	9,211
Huron	125,889	108,050	69,429	18,763	20,918	22,635
Bruce	28,087	21,955	16,808	13,333	12,862	12,951
Totals	196,998	150,912	103,035	53,411	47,229	44,797
Grey	19,304	10,869	13,808	15,438	17,830	22,622
Simcoe	25,957	27,624	20,672	27,291	30,761	25,801
Totals	45,261	38,492	34,480	42,729	48,591	48,423
Middlesex	114,127	55,911	54,709	53,096	28,658	22,967
Oxford	73,920	60,838	50,625	17,019	17,999	16,653
Brant	18,713	25,186	15,390	10,366	5,816	9,746
Perth	136,930	87,000	72,651	14,270	10,302	17,670
Wellington	67,962	53,813	40,879	19,393	12,480	13,579
Waterloo	19,267	17,900	17,885	17,654	14,520	16,369
Dufferin	7,419	4,808	4,441	6,337	4,350	5,794
Totals	438,328	305,456	256,580	138,135	94,125	102,778
Lincoln	9,699	7,088	7,828	7,112	2,651	4,780
Wentworth	30,555	23,121	18,899	9,801	8,937	10,233
Halton	27,855	18,834	17,535	3,019	3,664	5,281
Peel	29,888	19,880	16,367	15,617	13,451	12,517
York	78,793	60,456	63,888	20,940	20,625	30,724
Ontario	35,980	32,329	28,333	6,405	12,487	20,134
Durham	19,898	16,472	18,577	10,839	10,350	20,126
Northumberland	19,110	23,403	17,260	14,841	10,738	11,985
Prince Edward	10,016	8,755	3,925	5,031	2,566	1,964
Totals	262,794	210,338	192,612	93,605	85,469	117,744
Lennox and Addington	5,378	3,674	3,571	3,608	3,459	2,302
Frontenac	10,167	6,996	5,596	5,471	6,077	5,681
Leeds	13,556	13,112	9,370	8,856	6,417	9,135
Grenville	5,895	3,876		8,764	8,694	
Dundas	10,246	4,930	4,311	14,044	8,510	5,692
Stormont	6,239	4,414	1,685	7,885	5,234	2,864
Glengarry	10,816	4,525	2,938	13,515	8,167	3,394
Prescott	4,182	1,660	2,515	5,763	2,409	2,386
Russell	18,283	5,922	4,309	13,630	8,400	6,576
Carleton	28,299	21,025	17,719	15,376	13,484	20,907
Renfrew	8,656	5,920	3,937	7,590	7,926	5,235
Lanark	10,937	7,538	5,742	9,917	9,459	7,165
Totals	132,654	83,592	61,693	114,418	88,346	71,737
Victoria	46,943	40,109	26,373	9,108	21,068	13,103
Peterborough	16,834	13,019	10,412	16,469	15,537	15,997
Haliburton	899	380	272	2,812	690	925
Hastings	25,120	15,584	13,980	24,188	11,246	7,949
Totals	89,796	69,092	51,037	52,577	46,541	37,974
Muskoka	941	1,342	1,097	4,210	3,746	3,430
Parry Sound	552	1,190	370	3,820	4,419	1,932
Nipissing	58	64	71	562	687	176
Algoma	1,680	1,728	705	4,617	1,969	1,566
Totals	3,731	4,324	2,243	13,209	10,821	7,104
The Province	1,276,920	922,570	753,186	572,672	464,518	461,516

VALUES—TURNIPS AND HAY AND CLOVER.

TABLE XVI. Showing by County Municipalities and groups of Counties the value at market prices of the total crops of Turnips and Hay and Clover in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95.

Counties.	Turnips.			Hay and Clover.		
	1895.	1894.	1882-95.	1895.	1894.	1882-95.
	$	$	$	$	$	$
Essex	7,861	5,222	6,765	546,415	516,151	589,851
Kent	11,150	21,158	12,768	592,516	612,746	791,685
Elgin	25,681	30,885	15,616	367,635	507,790	742,925
Norfolk	87,018	78,999	48,164	143,836	390,875	525,153
Haldimand	6,563	2,213	3,760	295,323	550,202	618,766
Welland	9,003	6,294	6,561	462,234	630,980	634,535
Totals	147,276	144,771	93,634	2,407,959	3,208,744	3,902,915
Lambton	24,415	21,123	13,697	531,311	638,223	825,117
Huron	368,261	333,644	295,429	621,334	1,090,469	1,367,280
Bruce	336,121	351,976	268,333	440,746	920,120	1,098,153
Totals	728,797	706,743	577,459	1,593,391	2,648,812	3,290,550
Grey	458,150	544,977	407,414	550,474	1,141,961	1,461,414
Simcoe	360,700	324,245	190,947	898,663	912,900	1,067,407
Totals	818,850	869,222	598,361	1,449,137	2,054,861	2,528,821
Middlesex	109,938	95,266	73,701	787,913	981,492	1,372,672
Oxford	390,552	345,143	270,730	535,788	696,435	957,550
Brant	182,295	204,403	143,827	133,578	320,756	441,572
Perth	242,950	230,685	204,320	561,741	821,069	1,037,373
Wellington	609,483	691,845	591,182	683,560	957,799	1,250,874
Waterloo	192,360	219,473	216,919	211,388	481,504	622,457
Dufferin	198,893	176,793	118,601	242,802	385,998	454,449
Totals	1,926,471	1,963,608	1,619,280	3,156,770	4,645,053	6,136,947
Lincoln	15,376	10,802	9,427	315,692	531,150	543,556
Wentworth	164,265	164,387	128,542	223,516	493,033	630,895
Halton	98,963	98,926	83,217	199,986	394,617	443,631
Peel	88,013	91,867	63,046	194,217	448,179	531,180
York	287,599	299,320	173,919	715,675	964,951	1,042,556
Ontario	591,802	611,680	547,555	602,257	723,870	762,563
Durham	374,503	275,939	256,354	426,994	479,455	591,780
Northumberland	239,866	194,942	153,918	481,016	544,517	667,287
Prince Edward	13,473	4,748	3,644	145,743	285,927	387,550
Totals	1,873,860	1,752,611	1,419,622	3,305,096	4,865,699	5,600,998
Lennox and Addington	4,888	3,425	4,076	394,043	555,925	626,067
Frontenac	13,965	22,464	12,663	603,807	684,876	770,592
Leeds	26,289	13,678	13,992	512,861	703,375	1,410,338
Grenville	10,625	6,662		395,605	371,113	
Dundas	6,534	11,370	3,154	714,679	453,161	569,438
Stormont	5,152	4,788	2,646	625,640	364,067	511,484
Glengarry	9,231	11,858	3,917	805,502	609,260	605,865
Prescott	14,787	10,517	6,221	758,258	583,110	552,144
Russell	16,269	34,170	17,658	561,421	309,083	288,445
Carleton	74,916	85,201	62,085	1,426,443	951,766	897,642
Renfrew	47,575	16,359	23,208	1,128,906	851,203	738,392
Lanark	47,715	32,718	22,791	900,594	858,559	851,477
Totals	277,946	253,210	172,411	8,827,759	7,295,498	7,821,884
Victoria	216,177	214,100	151,795	475,260	456,692	477,916
Peterborough	135,486	94,005	67,293	199,518	383,330	424,071
Haliburton	10,837	7,855	8,937	96,088	105,046	110,150
Hastings	111,583	72,809	39,332	580,228	655,210	855,191
Totals	474,083	388,769	267,357	1,351,094	1,600,278	1,867,328
Muskoka	23,942	28,005	29,803	217,083	237,429	256,733
Parry Sound	41,181	28,418	24,233	148,264	203,546	145,329
Nipissing	4,900	6,920	2,516	90,405	63,655	27,925
Algoma	32,364	27,172	20,474	206,984	204,937	172,295
Totals	102,387	90,515	77,026	662,736	709,567	602,282
The Province	6,349,670	6,169,449	4,825,150	22,753,942	27,028,512	31,751,725

VALUES—ALL FIELD CROPS AND WOOL.

TABLE XVII. Showing by County Municipalities and groups of Counties the aggregate value of all field crops in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95; also the value at market prices of the total clip of wool in 1894 and 1895, with the yearly average for the fourteen years, 1882-95.

Counties.	All field crops.			Wool.		
	1895.	1894.	1882-95.	1895.	1894	1882 95.
	$	$	$	$	$	$
Essex	2,962,030	2,207,798	2,532,457	18,490	15,239	15,733
Kent	3,905,795	3,198,200	3,646,188	28,635	23,162	22,650
Elgin	2,374,770	2,264,068	2,675,506	32,524	29,249	26,478
Norfolk	1,613,106	1,627,834	2,161,867	23,616	19,579	17,617
Haldimand	1,277,238	1,410,569	1,770,533	23,009	18,443	19,630
Welland	1,276,815	1,305,521	1,496,064	14,219	11,321	13,040
Totals	13,409,752	12,013,990	14,282,615	140,493	116,993	115,148
Lambton	2,980,534	2,407,840	2,690,447	36,395	33,147	29,648
Huron	4,522,554	4,235,185	5,223,528	65,466	57,563	54,788
Bruce	3,210,091	3,485,905	4,052,881	73,559	60,169	55,903
Totals	10,713,179	10,128,930	11,966,856	175,420	150,879	140,339
Grey	3,774,957	4,373,243	5,074,646	97,718	85,218	77,298
Simcoe	5,411,237	4,463,205	4,873,314	73,291	58,967	50,654
Totals	9,186,194	8,836,448	9,947,960	171,009	144,185	127,952
Middlesex	4,644,188	3,682,304	4,827,187	51,149	46,117	43,952
Oxford	3,146,023	3,064,231	3,607,360	17,005	15,519	19,332
Brant	1,193,420	1,537,675	1,868,787	13,813	11,326	14,007
Perth	3,725,119	3,142,179	3,880,118	34,514	30,859	33,695
Wellington	4,138,955	4,144,108	4,851,915	64,108	50,451	51,893
Waterloo	1,908,753	2,195,415	2,753,236	22,037	19,184	22,095
Dufferin	1,810,746	1,887,518	1,928,005	23,431	19,857	19,912
Totals	20,567,204	19,653,430	23,716,608	226,057	193,313	204,886
Lincoln	1,072,637	1,141,463	1,417,338	12,961	11,363	10,569
Wentworth	1,601,888	1,721,452	2,235,476	19,931	16,868	16,345
Halton	1,250,298	1,280,067	1,601,826	16,810	13,902	13,828
Peel	1,747,921	1,972,134	2,466,288	21,623	19,134	19,227
York	4,013,828	3,886,742	4,782,368	39,580	31,789	31,249
Ontario	3,369,984	3,209,312	3,981,047	34,411	29,081	31,197
Durham	2,450,811	2,277,878	2,965,385	26,250	23,211	23,753
Northumberland	2,314,638	2,356,312	2,802,418	23,231	18,835	21,617
Prince Edward	1,044,758	1,260,188	1,504,447	7,935	6,841	8,649
Totals	18,866,763	19,105,548	23,756,593	202,732	171,024	176,434
Lennox and Addington	1,239,885	1,452,829	1,702,379	15,570	13,463	14,109
Frontenac	1,395,939	1,471,256	1,767,404	18,378	16,294	17,028
Leeds	1,468,243	1,677,250	3,230,924	17,078	15,484	30,567
Grenville	1,148,256	1,069,169		9,821	8,645	
Dundas	1,455,065	1,095,488	1,363,354	7,274	6,673	8,913
Stormont	1,147,508	824,865	1,105,070	9,588	7,983	9,098
Glengarry	1,510,224	1,132,159	1,301,836	14,357	10,581	12,964
Prescott	1,425,352	1,036,109	1,208,676	11,083	9,704	10,078
Russell	1,027,180	657,324	738,148	9,614	8,431	7,673
Carleton	3,090,239	2,440,173	2,812,619	28,873	22,289	25,942
Renfrew	2,484,163	1,765,621	2,209,718	41,649	32,556	33,276
Lanark	2,025,245	1,838,494	2,062,503	34,603	29,895	31,036
Totals	19,317,779	16,644,817	19,555,631	218,128	181,998	200,684
Victoria	2,239,986	2,147,873	2,438,279	25,520	25,973	24,047
Peterborough	1,325,258	1,527,506	1,800,629	18,280	16,205	16,679
Haliburton	222,065	194,571	252,960	5,733	4,567	3,526
Hastings	2,228,461	2,224,942	2,820,576	24,925	21,423	22,922
Totals	6,015,770	6,093,892	7,312,474	74,458	68,168	67,174
Muskoka	444,624	447,312	533,021	9,138	7,349	6,597
Parry Sound	408,097	447,121	356,845	9,930	7,600	4,266
Nipissing	180,717	135,767	62,899	1,355	865	306
Algoma	545,816	543,127	517,085	13,942	11,347	6,476
Totals	1,579,254	1,573,277	1,469,650	34,665	27,161	17,645
The Province	99,655,895	94,055,392	112,008,387	1,242,962	1,053,721	1,050,262

VALUE PER ACRE—FALL WHEAT, SPRING WHEAT, BARLEY.

TABLE XVIII. Showing by County Municipalities and groups of Counties the market value of crops per acre, of Wheat and Barley in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95.

Counties.	Fall wheat.			Spring wheat.			Barley.		
	1895.	1894.	1882-95.	1895.	1894.	1882-95.	1895.	1894.	1882-95.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Essex	15 73	9 52	16 20	12 22	7 27	12 68	11 88	10 12	12 73
Kent	13 65	11 33	16 52	11 73	7 88	12 95	13 29	11 18	13 64
Elgin	12 27	11 11	16 80	10 12	8 99	12 73	11 68	9 76	13 24
Norfolk	7 14	9 57	15 06	8 59	5 55	11 83	8 85	7 82	13 12
Haldimand	10 19	10 95	13 56	8 03	6 49	10 86	8 61	6 44	11 33
Welland	9 77	10 12	13 50	5 58	6 55	11 46	8 65	7 01	11 97
Group	11 64	10 60	15 57	10 25	7 21	12 07	11 34	9 30	12 52
Lambton	14 35	10 56	16 09	9 56	7 66	12 16	12 60	10 24	13 04
Huron	15 80	12 65	17 20	11 24	7 99	11 90	11 27	10 41	14 09
Bruce	13 03	11 83	16 71	11 45	8 60	11 89	10 18	10 61	13 52
Group	14 58	11 76	16 76	11 12	8 32	11 93	11 32	10 42	13 66
Grey	13 31	12 65	16 98	10 82	8 99	12 43	9 53	9 84	12 82
Simcoe	19 75	12 16	17 85	12 08	8 71	12 84	12 60	9 92	13 16
Group	17 83	12 27	17 58	11 46	8 82	12 63	11 71	9 89	13 03
Middlesex	15 25	10 56	17 21	12 22	8 49	12 39	12 40	10 08	13 52
Oxford	11 09	12 32	17 14	10 33	8 60	13 58	11 88	10 29	15 20
Brant	7 97	13 09	15 95	7 82	.....	11 51	7 35	8 50	13 30
Perth	15 18	12 87	17 30	14 10	8 21	12 92	13 09	10 08	15 14
Wellington	12 27	13 20	17 36	11 59	9 43	12 75	10 02	10 37	14 27
Waterloo	10 46	12 76	17 44	12 15	11 49	12 69	9 90	10 12	15 09
Dufferin	14 21	13 15	16 89	12 63	11 04	12 53	10 14	11 42	12 97
Group	12 70	12 15	17 11	12 15	9 83	12 74	10 83	10 15	14 26
Lincoln	11 92	10 95	15 10	12 08	5 11	11 86	9 41	7 29	12 65
Wentworth	10 67	12 27	15 68	7 68	6 60	12 41	9 66	8 26	13 75
Halton	12 40	13 59	16 28	8 45	6 16	12 38	9 66	7 13	14 11
Peel	12 40	13 59	17 51	10 96	7 71	13 84	8 65	9 60	13 80
York	14 90	12 87	18 45	10 68	7 99	14 13	9 57	8 63	14 58
Ontario	15 11	11 55	18 66	9 56	8 32	13 90	9 74	7 94	14 18
Durham	14 21	11 17	16 72	9 84	6 88	13 55	8 77	7 37	13 32
Northumberland	14 48	10 29	16 25	9 21	7 16	11 50	7 84	6 80	11 54
Prince Edward	14 07	8 97	14 21	9 21	7 88	11 42	8 12	8 87	10 77
Group	12 87	12 21	16 76	9 87	7 67	13 29	9 01	8 19	13 21
Lennox and Addington	13 31	11 33	14 86	9 63	9 99	12 04	9 01	9 68	11 68
Frontenac	15 87	10 07	16 58	11 10	8 66	12 76	8 97	8 59	12 30
Leeds	15 32	9 96	15 97	10 89	8 82	13 22	9 13	8 51	12 57
Grenville	13 86	11 00		12 59	8 77		9 09	9 44	
Dundas	19 06	10 73	17 46	14 38	9 27	15 43	11 23	9 64	15 38
Stormont	13 86	9 74	16 66	14 17	6 99	14 63	10 42	8 59	13 49
Glengarry	17 95	9 35	15 38	12 15	6 55	13 47	10 87	7 49	11 59
Prescott	17 67	11 00	11 47	12 84	5 44	13 17	11 11	7 29	12 64
Russell	19 61	11 00	16 81	12 91	5 33	14 15	12 86	5 75	11 99
Carleton	16 22	11 00	14 64	12 42	7 88	14 77	11 39	7 86	14 42
Renfrew	14 35	11 88	16 89	11 45	7 60	13 62	8 65	7 74	11 79
Lanark	17 53	11 61	16 91	11 17	8 38	12 73	11 07	9 44	12 83
Group	15 24	10 92	16 02	11 69	7 76	13 62	10 04	8 67	12 56
Victoria	15 52	11 05	17 15	10 12	8 88	12 55	10 18	9 52	12 89
Peterborough	12 82	11 50	16 36	7 26	7 33	11 14	7 76	8 26	12 46
Haliburton	13 17	7 43	13 77	8 38	5 61	10 80	8 61	8 22	11 97
Hastings	12 75	10 40	15 88	9 63	8 10	12 65	8 20	8 18	11 96
Group	13 37	10 87	16 36	8 99	8 11	12 04	9 11	8 95	12 41
Muskoka	10 40	6 44	14 84	9 40	8 49	12 73	8 77	7 83	10 36
Parry Sound	13 37	8 03	12 74	9 84	6 83	13 35	9 33	8 02	11 11
Nipissing	13 86	8 25	11 50	14 38	6 55	11 62	9 94	6 08	9 77
Algoma	14 48	9 79	17 41	11 38	7 83	16 22	10 18	8 51	12 43
Group	14 29	9 30	16 69	11 30	7 68	15 20	9 48	8 04	11 30
The Province	13 20	11 66	16 60	10 82	8 13	12 96	10 22	9 15	13 22

VALUE PER ACRE—OATS, RYE AND PEAS.

TABLE XIX. Showing by County Municipalities and groups of Counties the market value of crops per acre of Oats, Rye and Peas in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95.

Counties.	Oats.			Rye.			Peas.		
	1895.	1894.	1882-95.	1895.	1894.	1882-95.	1895.	1894.	1882-95
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Essex	13 27	10 69	12 68	9 21	8 18	10 43	12 49	9 92	11 31
Kent	12 45	11 86	13 42	9 03	7 96	10 84	10 36	9 22	11 22
Elgin	10 80	10 01	12 53	8 39	7 07	9 30	10 30	8 09	10 66
Norfolk	8 85	6 68	10 59	5 70	5 79	7 67	8 44	6 32	10 74
Haldimand	9 95	7 55	10 53	6 38	5 88	9 04	8 77	6 65	10 00
Welland	10 48	6 90	10 29	7 16	7 03	8 82	9 10	7 83	9 81
Group	11 27	9 37	11 90	6 96	6 64	8 49	9 36	7 28	10 57
Lambton	12 80	11 18	12 15	9 85	8 09	9 44	10 41	9 27	10 87
Huron	11 49	10 63	12 71	8 16	9 81	9 99	12 88	10 61	13 28
Bruce	9 98	9 73	11 31	7 25	8 27	9 91	12 44	10 67	13 48
Group	11 31	10 43	12 11	8 60	8 68	9 80	12 44	10 54	13 12
Grey	9 22	9 67	11 07	6 61	6 63	9 45	10 58	10 61	12 63
Simcoe	12 02	10 38	11 91	7 93	6 72	9 87	12 66	10 93	12 94
Group	10 44	9 97	11 42	7 73	6 70	9 79	11 66	10 78	12 77
Middlesex	12 45	9 06	12 75	8 85	8 31	9 58	12 88	9 17	11 52
Oxford	12 02	10 41	13 13	7 43	7 91	8 65	12 44	9 49	12 24
Brant	9 14	8 56	11 87	6 89	7 69	8 04	8 22	7 02	11 04
Perth	12 92	9 95	13 86	10 72	10 52	9 33	15 07	10 18	13 32
Wellington	10 30	10 13	12 54	7 11	6 98	9 46	12 44	9 81	13 13
Waterloo	9 75	9 42	12 56	7 71	8 75	9 59	11 73	9 65	13 20
Dufferin	9 75	10 53	11 77	9 26	6 85	9 90	10 14	11 42	12 26
Group	11 24	9 83	12 79	7 98	7 96	9 08	12 21	9 68	12 58
Lincoln	9 31	7 61	10 90	8 12	7 29	8 77	9 59	7 56	10 42
Wentworth	10 62	8 07	12 05	8 30	7 25	9 43	9 54	7 45	11 47
Halton	10 10	8 32	12 00	7 89	6 50	9 43	11 62	7 13	12 26
Peel	9 72	9 79	12 65	6 48	7 34	10 96	10 36	7 56	11 93
York	10 71	10 26	13 46	8 30	7 51	9 73	12 22	8 68	12 84
Ontario	10 65	8 81	12 72	7 52	7 65	9 70	9 04	8 52	11 97
Durham	10 10	8 35	11 86	6 34	6 10	8 41	9 32	9 27	11 54
Northumberland	8 53	7 82	10 01	6 06	5 92	7 51	7 45	9 76	10 40
Prince Edward	8 18	7 73	9 43	6 89	6 41	8 00	7 84	11 26	10 49
Group	10 05	8 91	12 12	6 83	6 40	8 31	9 57	8 90	11 64
Lennox and Addington	7 65	8 90	9 60	6 61	6 98	8 56	9 04	9 22	10 79
Frontenac	8 24	8 07	9 77	7 66	6 72	9 66	8 66	9 97	10 81
Leeds	7 42	8 25	10 51	7 34	6 01	10 29	8 88	9 76	11 39
Grenville	7 92	8 47		6 98	7 78		9 81	9 92	
Dundas	10 01	8 90	11 99	10 40	8 49	13 07	12 49	10 13	13 10
Stormont	9 69	7 95	11 66	5 47	7 51	11 88	11 34	10 02	12 08
Glengarry	10 01	6 84	10 82	12 08	6 63	9 42	10 36	6 65	10 51
Prescott	10 01	5 70	10 39	.....	6 63	10 20	11 18	5 79	10 04
Russell	11 49	7 11	10 90	9 80	6 19	11 43	11 62	8 42	11 51
Carleton	10 62	8 65	11 96	7 84	7 65	10 41	12 33	8 42	12 74
Renfrew	9 08	7 48	10 85	8 03	6 85	10 62	9 37	9 81	12 02
Lanark	10 33	8 75	10 89	8 21	6 90	11 16	9 86	10 72	12 45
Group	9 38	8 01	10 92	7 65	7 06	10 31	9 84	9 38	11 62
Victoria	10 59	8 65	11 34	5 65	6 19	9 38	9 10	9 65	11 91
Peterborough	7 45	8 65	10 39	6 48	5 92	8 52	7 51	10 34	11 33
Haliburton	7 94	5 11	9 20	6 52	5 30	9 43	8 49	6 97	10 62
Hastings	7 83	8 59	9 94	6 57	7 29	8 89	8 71	10 13	10 71
Group	8 78	8 53	10 52	6 44	6 84	8 86	8 46	9 93	11 27
Muskoka	9 14	7 11	9 97	8 34	6 76	10 64	11 07	10 29	12 12
Parry Sound	8 38	8 25	9 95	7 62	7 20	12 28	11 62	11 26	12 43
Nipissing	9 84	7 08	10 12	6 61	6 63	10 05	11 89	7 50	11 14
Algoma	9 49	9 89	11 53	10 12	8 84	10 23	12 77	11 68	14 90
Group	9 06	8 28	10 38	8 79	7 29	11 07	12 06	10 79	13 44
The Province	10 39	9 23	11 76	7 20	6 80	9 14	10 66	9 57	12 05

VALUES PER ACRE—CORN, BUCKWHEAT AND BEANS.

TABLE XX. Showing by County Municipalities and groups of Counties the market value of crops per acre of Corn (for husking and silo and the average for the two) Buckwheat and Beans in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95.

Counties.	Corn.					Buckwheat.			Beans.		
	Husking.	Silo.	Average.								
			1895.	1894.	1882-95.	1895.	1894.	1882-95.	1895.	1894.	1882-95.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Essex	21 47	8 50	21 12	15 28	20 18	7 73	5 57	8 35	18 18	13 14	20 08
Kent	20 79	14 42	20 49	15 62	19 91	7 40	6 70	7 93	20 36	13 80	18 15
Elgin	19 66	18 04	19 46	18 29	19 96	7 62	7 29	7 96	19 41	19 10	20 32
Norfolk	18 31	21 10	18 78	14 71	17 76	7 47	6 47	7 32	17 61	15 46	17 96
Haldimand	17 63	20 62	18 98	11 93	16 83	8 83	5 02	6 82	12 78	18 99	18 14
Welland	17 63	18 90	17 82	15 90	17 44	7 03	5 49	7 25	15 53	15 90	15 33
Group	20 24	18 03	20 03	15 78	19 47	7 50	6 26	7 51	19 96	14 46	18 29
Lambton	19 44	21 76	19 78	16 46	17 58	7 25	6 94	7 36	19 22	16 89	17 98
Huron	14 69	27 44	23 30	16 70	19 74	7 43	6 86	7 77	18 18	22 52	23 84
Bruce	12 88	21 48	20 33	16 11	17 93	7 91	6 39	7 34	17 52	20 20	19 00
Group	18 67	24 12	20 67	16 46	18 04	7 44	6 85	7 46	19 03	17 50	18 85
Grey	11 98	24 90	22 87	16 29	17 50	7 03	6 51	7 13	18 37	16 56	19 31
Simcoe	15 82	28 00	22 08	19 54	20 00	8 87	7 48	7 87	20 17	16 89	19 29
Group	14 78	25 98	22 50	18 02	18 80	8 48	7 35	7 65	19 48	16 71	19 30
Middlesex	18 53	25 48	20 34	18 39	19 24	8 10	9 80	7 88	20 74	19 54	19 59
Oxford	15 59	21 96	18 08	17 31	18 03	7 69	6 58	7 12	17 52	23 18	23 82
Brant	16 27	20 66	17 72	19 12	19 08	5 26	6 66	6 99	14 49	13 80	17 03
Perth	15 37	23 26	22 10	20 08	20 35	7 36	8 82	8 32	18 94	23 73	24 03
Wellington	15 82	23 86	23 13	17 51	19 89	10 12	4 43	8 77	21 31	19 32	18 05
Waterloo	14 92	19 90	18 16	17 18	18 85	5 34	7 84	6 92	23 68	14 90	18 78
Dufferin	15 37	24 00	21 34	19 61	16 92	9 20	4 70	7 84	18 94	22 08	20 86
Group	17 17	23 08	19 67	18 22	18 91	7 45	7 67	7 50	20 01	20 26	19 86
Lincoln	16 72	20 34	17 40	14 65	17 75	7 14	5 96	7 86	15 06	18 77	19 44
Wentworth	14 01	21 78	18 32	16 47	20 13	6 15	6 43	7 97	18 94	17 66	21 64
Halton	18 53	23 40	22 03	18 21	19 03	7 36	7 84	6 95	18 94	16 56	18 50
Peel	12 43	24 00	21 73	21 39	19 67	8 46	7 84	6 95	23 68	.. ..	24 70
York	13 33	24 56	22 38	16 32	18 72	9 31	8 82	8 65	15 81	24 84	22 70
Ontario	17 63	24 36	21 40	18 46	17 77	8 50	6 98	8 38	18 28	18 44	20 13
Durham	15 59	26 28	20 74	15 76	16 66	8 02	7 25	8 33	17 99	19 21	19 37
Northumberland	14 01	21 34	17 58	15 12	16 14	6 40	7 37	8 00	18 18	16 67	19 26
Prince Edward	16 50	21 60	18 05	14 01	14 40	5 74	5 76	7 92	10 99	19 87	20 47
Group	15 73	23 09	19 40	15 99	17 32	7 00	6 95	8 05	16 69	18 44	20 07
Lennox and Addington	16 72	24 00	19 72	17 23	16 82	8 02	5 88	8 50	23 68	22 08	23 51
Frontenac	15 37	22 84	19 51	17 24	16 97	7 18	7 25	8 75	13 73	19 32	25 39
Leeds	15 37	25 54	18 84	18 86	19 37	8 50	8 35	8 16	14 87	18 44	21 30
Grenville	22 83	26 22	24 24	19 18		8 02	6 86		14 02	16 56	
Dundas	19 89	30 26	25 20	19 87	20 63	8 46	7 49	9 96	19 98	18 11	25 20
Stormont	16 05	28 80	20 87	22 66	20 08	8 83	8 23	9 20	19 89	18 22	26 99
Glengarry	15 59	28 30	23 71	20 43	20 25	9 42	6 15	8 29	17 52	13 25	21 04
Prescott	20 79	28 40	23 57	17 15	18 88	8 24	7 06	7 77	18 18	15 90	27 38
Russell	12 66	26 36	19 49	21 87	20 76	9 53	7 84	9 07	23 68	15 46	21 42
Carleton	15 82	26 54	23 78	17 79	18 77	8 91	7 06	8 36	21 21	21 64	23 43
Renfrew	11 53	25 78	21 14	15 81	17 36	7 54	6 51	8 17	15 34	18 99	22 52
Lanark	17 40	30 24	26 04	19 54	18 32	9 35	6 47	8 16	19 51	20 64	25 82
Group	17 29	26 92	22 04	18 85	18 94	8 48	6 90	8 46	18 39	18 71	23 94
Victoria	11 98	22 80	19 78	15 38	17 85	7 99	6 55	7 40	13 07	12 70	17 65
Peterborough	10 62	23 76	20 28	14 94	17 03	7 62	6 70	7 79	9 94	16 56	17 10
Haliburton	9 04	24 00	11 45	10 53	14 14	7 43	5 21	7 25	12 97	11 59	18 63
Hastings	14 01	21 92	17 77	14 66	15 79	6 81	6 59	8 20	19 70	15 90	20 01
Group	13 57	22 34	18 16	14 71	16 03	7 29	6 56	7 92	15 98	15 02	18 87
Muskoka	14 01	12 00	13 38	13 36	11 63	7 80	6 66	9 47	9 47	22 08	19 22
Parry Sound	9 04	20 00	13 38	10 79	12 28	9 35	5 76	7 95	11 36	22 08	19 82
Nipissing	10 85	16 00	12 82	10 44	12 52	8 61	7 84	8 42	14 21	22 08	20 45
Algoma	11 30	18 00	15 24	14 10	14 03	7 99	7 84	9 01	18 94	16 56	21 95
Group	11 88	16 44	13 70	12 50	12 28	8 40	7 07	8 96	13 41	20 54	20 07
The Province	18 52	23 69	20 23	16 76	18 73	7 60	6 84	8 07	19 45	15 41	19 10

VALUE PER ACRE—POTATOES, MANGEL-WURZELS AND CARROTS.

TABLE XXI. Showing by County Municipalities and groups of Counties the market value per acre of Potatoes, Mangel-Wurzels and Carrots in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95.

Counties.	Potatoes.			Mangel-Wurzels.			Carrots.		
	1895.	1894.	1882-95.	1895.	1894.	1882-95.	1895.	1894.	1882-95.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Essex	23 63	19 72	30 63	35 44	28 00	32 68	45 00	28 63	34 25
Kent	29 49	25 45	50 42	38 72	37 20	34 21	49 25	39 25	38 84
Elgin	29 69	30 55	41 23	38 72	42 00	35 53	47 00	57 00	44 09
Norfolk	27 07	28 39	43 35	41 12	30 32	33 09	43 00	37 38	37 62
Haldimand	24 64	23 19	43 16	24 80	20 32	26 03	30 13	26 63	32 09
Welland	24 85	27 93	39 27	33 44	29 88	33 21	42 88	27 75	36 33
Group	26 94	26 23	43 11	36 87	33 70	33 04	44 21	42 05	38 27
Lambton	31 51	23 86	39 80	44 08	28 64	33 46	54 38	46 38	39 53
Huron	33 53	40 43	52 39	41 52	39 12	38 02	45 88	45 38	47 85
Bruce	29 90	34 55	48 66	33 20	34 96	34 16	33 50	42 88	42 32
Group	31 68	34 13	47 98	40 58	36 63	36 54	44 55	44 93	44 27
Grey	30 91	35 68	52 68	30 40	26 64	33 68	38 50	35 88	44 88
Simcoe	39 59	35 82	52 03	38 80	35 28	33 56	44 38	49 38	45 50
Group	35 99	35 77	52 34	34 71	32 32	33 61	42 06	43 38	45 21
Middlesex	35 35	33 74	44 44	42 16	31 84	35 41	54 63	40 25	42 53
Oxford	31 71	36 21	46 21	40 00	39 20	38 21	45 75	48 13	49 86
Brant	25 45	34 44	45 75	32 32	46 64	39 26	44 88	58 75	51 29
Perth	38 18	38 69	48 66	40 96	32 56	37 16	43 38	33 13	47 25
Wellington	35 75	47 26	53 13	36 48	33 76	36 02	43 88	40 00	43 25
Waterloo	31 51	32 92	50 65	30 96	34 96	34 93	48 50	44 00	51 15
Dufferin	31 51	46 34	57 26	41 68	29 68	34 16	37 50	37 50	41 68
Group	33 69	39 20	49 54	39 35	34 76	36 69	47 08	41 76	46 48
Lincoln	25 25	29 17	40 15	34 64	28 24	31 95	32 63	26 25	38 55
Wentworth	25 45	31 51	48 39	41 52	34 56	38 81	49 50	49 38	47 60
Halton	30 30	33 18	45 95	33 28	31 76	36 38	43 75	46 38	48 45
Peel	28 89	32 57	43 06	37 36	28 40	32 47	43 50	36 75	42 57
York	35 35	34 55	44 61	34 08	33 68	35 93	43 63	48 88	50 12
Ontario	35 75	33 22	50 24	37 44	34 32	36 46	45 75	46 25	48 28
Durham	31 92	37 59	52 84	33 84	28 40	35 73	47 13	45 00	47 58
Northumberland	28 08	33 28	46 41	35 52	32 64	34 66	38 25	38 62	42 35
Prince Edward	24 04	30 30	38 79	32 00	30 40	24 53	43 75	29 50	29 31
Group	30 89	33 32	46 13	35 57	32 19	35 34	42 61	42 44	46 26
Lennox and Addington	30 30	38 94	47 34	27 44	22 00	27 47	32 50	31 25	35 97
Frontenac	27 07	41 95	43 62	28 72	29 52	28 99	32 38	41 63	33 82
Leeds	33 73	40 04	49 07	34 32	25 76	32 09	44 50	31 00	40 24
Grenville	40 40	49 77		33 12	34 00		42 75	46 00	
Dundas	36 97	51 05	57 64	38 96	34 00	34 49	49 63	42 63	48 65
Stormont	31 51	41 88	49 85	31 04	24 80	29 05	39 63	33 13	37 19
Glengarry	31 51	35 58	46 45	41 44	28 64	31 26	51 00	36 63	37 71
Prescott	37 57	31 06	51 41	31 68	21 84	28 91	45 38	27 38	36 71
Russell	36 97	42 69	45 11	31 36	42 00	31 45	53 88	52 50	42 54
Carleton	30 30	44 57	53 24	30 56	28 88	29 73	41 00	33 63	40 28
Renfrew	29 49	43 65	61 75	33 68	40 00	30 28	41 25	46 63	38 78
Lanark	38 78	47 19	59 40	38 24	28 88	32 44	47 00	40 25	42 65
Group	33 15	42 62	51 66	32 90	29 21	30 56	44 33	38 58	39 99
Victoria	37 37	34 83	54 48	36 56	31 36	57 41	40 13	46 00	45 98
Peterborough	32 93	34 27	50 22	32 56	28 48	30 53	47 88	39 13	42 89
Haliburton	38 38	31 36	50 08	25 68	20 00	27 20	31 25	30 00	36 58
Hastings	27 07	35 40	50 17	32 88	32 00	28 77	37 50	38 25	36 63
Group	31 98	34 76	51 66	34 54	30 85	33 10	40 26	41 51	42 15
Muskoka	28 89	38 44	57 01	23 52	22 00	21 94	35 38	33 75	35 73
Parry Sound	37 57	47 54	62 63	24 00	34 00	26 43	35 38	43 75	37 78
Nipissing	36 56	36 40	53 13	29 36	32 00	35 50	31 25	31 25	29 35
Algoma	32 93	51 08	70 67	24 00	36 00	26 11	39 13	28 13	33 32
Group	33 67	44 53	61 80	24 55	29 62	24 12	36 39	35 00	35 00
The Province	32 15	36 33	49 24	37 14	33 34	35 03	44 04	41 53	43 76

VALUE PER ACRE—TURNIPS, HAY AND ALL FIELD CROPS.

TABLE XXII. Showing by County Municipalities and groups of Counties the market value per acre of Turnips, Hay and Clover and all field crops in Ontario in the years 1894 and 1895, with the yearly average for the fourteen years 1882-95.

Counties.	Turnips.			Hay and Clover.			All field crops.		
	1895.	1894.	1882-95.	1895.	1894.	1882-95.	1895.	1894.	1882-95.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Essex	39 70	20 40	28 31	13 16	12 55	15 52	16 09	12 42	16 38
Kent	36 20	32 60	34 51	11 69	11 79	15 08	15 49	12 82	16 45
Elgin	42 10	41 40	37 45	7 38	9 68	14 51	12 43	12 02	15 43
Norfolk	39 50	40 70	38 78	4 31	10 13	12 92	9 84	10 01	13 72
Haldimand	29 30	21 70	29 38	5 54	10 13	12 13	8 73	9 39	12 28
Welland	33 10	28 10	33 65	8 73	11 87	13 20	10 62	10 98	13 33
Group	38 60	36 95	36 14	8 55	11 00	13 87	12 68	11 47	14 82
Lambton	47 50	36 80	34 33	8 24	9 83	14 03	13 02	11 47	14 43
Huron	40 30	39 80	40 85	6 03	9 53	13 45	12 19	11 96	15 27
Bruce	38 30	42 70	41 69	4 55	9 15	12 10	10 37	11 26	14 21
Group	39 55	41 09	41 05	6 03	9 46	13 10	11 78	11 60	14 70
Grey	38 80	42 50	41 27	4 31	8 77	12 02	9 59	11 23	13 87
Simcoe	50 00	50 60	44 03	10 21	10 43	13 10	14 25	12 10	14 94
Group	43 05	45 20	42 11	6 71	9 44	12 45	11 88	11 65	14 37
Middlesex	42 30	38 00	38 33	8 73	10 36	14 93	13 85	11 39	15 56
Oxford	46 70	43 70	44 93	8 86	11 26	15 27	13 32	13 09	16 30
Brant	40 01	49 10	45 80	4 67	10 58	14 03	9 83	12 54	15 43
Perth	44 80	35 00	40 67	7 26	10 74	14 82	13 48	12 09	16 11
Wellington	40 70	43 60	43 89	7 26	10 21	14 51	12 06	12 73	16 04
Waterloo	33 70	37 30	41 00	5 41	11 49	14 73	10 68	12 23	16 26
Dufferin	48 10	46 50	42 48	6 64	10 13	12 96	11 29	12 61	14 53
Group	42 11	42 04	42 99	7 40	10 62	14 62	12 45	12 33	15 83
Lincoln	31 90	31 40	35 18	7 63	12 25	13 25	10 47	11 19	13 89
Wentworth	40 70	40 70	46 30	5 54	11 26	14 04	11 02	11 82	15 51
Halton	37 70	41 90	44 05	6 27	11 87	13 21	11 22	11 76	14 78
Peel	37 50	41 40	40 11	5 17	11 42	13 71	10 25	11 62	14 85
York	40 80	47 10	41 80	8 86	11 87	13 68	12 57	12 07	15 64
Ontario	43 40	43 40	43 46	9 84	12 40	13 96	12 84	12 26	15 86
Durham	48 70	42 40	45 33	8 86	10 74	13 41	11 59	10 53	14 42
Northumberland	41 20	40 80	41 18	8 24	10 05	12 17	10 14	10 38	12 68
Prince Edward	42 50	33 20	28 47	4 43	9 22	12 34	8 32	9 59	11 50
Group	42 58	42 91	43 30	7 64	11 34	13 35	11 25	11 34	14 53
Lennox and Addington	24 20	12 50	24 85	6 52	8 92	11 74	8 80	10 05	12 17
Frontenac	35 00	36 00	30 81	8 98	9 75	11 98	9 97	10 47	12 55
Leeds	41 40	30 60	37 11	7 50	9 75	12 53	9 71	10 97	13 35
Grenville	42 50	41 90		9 47	9 00		11 33	11 16	
Dundas	49 50	40 90	36 25	17 96	11 34	15 61	16 00	11 90	15 58
Stormont	32 00	31 50	28 45	16 11	10 21	15 15	14 37	10 86	14 79
Glengarry	51 00	41 90	42 12	17 47	12 85	15 62	15 19	10 87	14 29
Prescott	55 80	28 50	38 17	15 50	12 63	14 80	14 35	10 32	13 92
Russell	42 70	46 30	43 17	21 16	11 79	14 50	17 40	11 00	14 14
Carleton	39 10	37 80	37 15	18 45	12 63	14 21	15 16	11 78	14 88
Renfrew	48 30	31 40	35 32	14 88	10 74	11 24	12 58	10 13	12 91
Lanark	48 10	38 00	38 76	12 79	11 26	13 33	12 97	11 27	13 71
Group	42 77	36 38	36 58	13 34	10 85	13 28	12 78	10 89	13 68
Victoria	39 00	39 40	39 53	9 72	10 05	11 70	11 69	10 70	13 61
Peterborough	44 70	39 30	39 84	4 92	9 07	10 71	8 73	10 26	12 46
Haliburton	25 50	22 90	28 28	7 75	7 64	10 22	9 41	7 81	11 87
Hastings	46 30	38 10	34 35	7 26	8 47	11 82	9 69	10 03	12 66
Group	41 55	38 57	38 25	7 43	8 95	11 41	10 08	10 22	12 88
Muskoka	30 50	33 30	32 05	8 98	10 13	11 96	10 35	10 67	13 53
Parry Sound	37 10	30 20	31 55	7 13	9 68	10 79	10 03	11 21	13 33
Nipissing	35 00	40 00	34 00	14 76	11 34	12 16	14 49	10 74	13 98
Algoma	38 30	35 80	35 61	9 47	10 21	12 44	11 49	11 75	15 28
Group	35 55	33 35	32 82	9 09	10 11	11 79	10 99	11 18	14 07
The Province	41 83	41 78	41 82	8 97	10 49	13 35	11 98	11 43	14 54

ANNUAL REPORT

OF THE

BUREAU OF INDUSTRIES

FOR THE

PROVINCE OF ONTARIO

1895.

PART IV. LOAN AND INVESTMENT COMPANIES.
PART V. CHATTEL MORTGAGES.

(PUBLISHED BY THE ONTARIO DEPARTMENT OF AGRICULTURE, TORONTO.)

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1896.

FOURTEENTH ANNUAL REPORT

OF THE

BUREAU OF INDUSTRIES

PARTS IV AND V

1895.

To the Honorable the Minister of Agriculture :

Sir,—I have the honor to present herewith Parts iv and v of the fourteenth annual report of the Bureau of Industries, being a statement of the affairs of Loan and Investment Companies, and a return by County Court Clerks of Chattel Mortgages on record in Ontario for the year ending December 31, 1895.

I have the honor to be, Sir,

Your obedient servant,

C. C. JAMES,

Secretary.

Toronto, June 1, 1896.

PART IV.

LOAN AND INVESTMENT COMPANIES OF ONTARIO

1895.

STATEMENT OF AFFAIRS.

The report as presented contains the returns made to this Bureau by ninety companies doing business in Ontario for 1895.

In addition to the eighty-nine companies reported for 1894, we have a return this year from the Sun Savings and Loan Company.

During 1895 the following two companies began operations but had not completed a year's business on December 31st, viz.:

The Victoria Loan and Savings Company organized in October, 1895, with head office at Lindsay, of which John Magwood is President and W. H. Clarke is Manager.

The Reliance Loan and Savings Company organized in July, 1895, with head office at Toronto, and of which Hon. John Dryden is President and John Blacklock is Manager.

The following table shows the capital subscribed, the assets and liabilities of the ninety companies for 1895, and for comparison similar totals are given for the previous eight years:

Location of head office of company.	No. of companies.	Capital subscribed.	Liabilities to stockholders.	Liabilities to the public.	Total liabilities or assets.	Secured loan assets.	Property assets.
		$	$	$	$	$	$
Hamilton	4	3,032,132	2,522,132	3,363,289	5,885,421	5,380,633	504,788
Kingston	2	449,000	512,609	485,527	998,136	836,037	162,099
London	8	8,932,100	7,478,418	10,755,885	18,234,303	17,151,099	1,083,204
Ottawa	3	756,600	538,881	34,327	573,208	513,293	59,915
Owen Sound ..	2	553,900	248,127	158,332	406,459	398,356	8,103
St. Thomas....	5	2,488,800	1,435,254	1,326,314	2,761,568	2,665,224	96,344
Sarnia	3	1,179,200	1,428,016	1,292,354	2,720,370	2,480,205	240,165
Stratford	2	628,600	465,097	577,901	1,042,998	1,030,004	12,994
Toronto	44	72,959,971	31,877,488	60,332,817	92,210,305	78,899,538	13,310,767
Woodstock	2	1,257,900	381,504	230,725	615,229	585,723	29,506
Other places ..	15	6,583,121	5,295,317	8,261,616	13,556,933	10,839,342	2,717,591
Totals, 1895	90	98,822,324	52,185,843	86,819,087	139,004,930	120,779,454	18,225,476
1894	89	94,047,711	50,582,921	86,968,820	137,541,741	120,229,818	17,311,923
1893	86	88,582,985	49,285,824	84,916,664	134,202,488	118,040,915	16,161,573
1892	76	86,278,277	45,893,742	77,747,428	123,621,170	109,251,079	14,370,091
1891	71	76,152,817	44,379,397	72,757,149	117,136,546	104,365,025	12,771,521
1890	67	70,672,710	42,673,552	65,544,199	108,217,751	98,111,032	10,106,719
1889	71	63,604,221	41,629,987	62,967,156	104,597,143	94,666,887	9,930,256
1888	64	67,939,559	40,108,161	59,540,176	99,648,336	89,042,190	10,606,146
1887	55	56,114,316	35,910,563	51,177,104	87,087,667	79,035,804	8,051,063

LIST OF 90 LOAN AND INVESTMENT COMPANIES REPORTING STATEMENT OF AFFAIRS.

Name of Company.	When organized.	President.	Manager.	Head Office.	For the year ending—
Barrie Loan and Savings Company	April 14, 1881	N. Dyment	Robert Laidlaw	Barrie	December 31, 1895.
Hastings Loan and Investment Society	January, 1876	Sir Mackenzie Bowell	J. P. C. Phillips	Belleville	December 31, 1895.
Royal Loan and Savings Company	June 1, 1876	William Watt, sr	R. S. Schell	Brantford	December 31, 1895.
Brockville Loan and Savings Company	July 1, 1885	W. H. Cole	D. B. Jones	Brockville	December 31, 1895.
Chatham Loan and Savings Company	Sept. 28, 1881	Archibald Bell	S. F. Gardiner	Chatham	December 31, 1895.
East Lambton Farmers' Loan and Savings Company	Dec. 18, 1891	James Hutton, M.D	Newton Tripp	Forest	February 29, 1896.
Huron and Bruce Loan and Investment Company	April 17, 1885	J. H. Colborne	Horace Horton	Goderich	December 31, 1895.
Guelph and Ontario Investment and Savings Society	1876	David Stirton	John E. McElderry	Guelph	December 31, 1895.
Hamilton Homestead Loan and Savings Society	Jan. 1, 1883	James E. O'Reilly	J. A. Studdart	Hamilton	December 31, 1895.
Hamilton Mutual Building Society	Dec. 1, 1890	Alfred Ward	Walter Anderson	Hamilton	November 30, 1895.
Hamilton Provident and Loan Society	September, 1871	George H. Gillespie	C. Ferrie	Hamilton	December 31, 1895.
Landed Banking and Loan Company	February, 1877	Matthew Leggat	C. W. Cartwright	Hamilton	December 31, 1895.
Frontenac Loan and Investment Society	December, 1863	Sir R. J. Cartwright	Thomas Briggs	Kingston	December 31, 1895.
Ontario Building and Savings Society	June 26, 1874	C. V. Price	James McArthur	Kingston	December 31, 1895.
Agricultural Savings and Loan Company	May, 1872	Daniel Regan	C. P. Butler	London	December 31, 1895.
Birkbeck Loan Company	Feb. 11, 1893	R. J. C. Dawson	Thomas H. Luscombe	London	December 31, 1895.
Canadian Savings and Loan Company	October, 1875	Robert Fox	Hiram W. Blinn	London	May 31, 1895.
Dominion Savings and Investment Society	April, 1872	Robert Reid	Nathaniel Mills	London	December 31, 1895.
Huron and Erie Loan and Savings Company	1864	John W. Little	George A. Somerville	London	December 31, 1895.
London Loan Company	1877	Thomas Kent	Malcolm John Kent	London	December 31, 1895.
Ontario Loan and Debenture Company	1870	John McClary	William F. Bullen	London	December 31, 1895.
People's Building and Loan Association	June 17, 1892	W. M. Spencer	A. A. Campbell	London	August 31, 1895.
Niagara Falls Building, Savings and Loan Association	April 2, 1894	Frank LeBlond	L. F. Williams	Niagara Falls	Septemb'r 30, 1895.
Orangeville Building and Loan Association	1873	Alexander Steele	Francis Irwin	Orangeville	December 31, 1895.
Ontario Loan and Savings Company	February, 1873	W. F. Cowan	T. H. McMillan	Oshawa	December 31, 1895
Home Building and Savings Association	Septemb'r, 1890	John R. Armstrong	C. A. Douglas	Ottawa	August 31, 1895.
Metropolitan Loan and Savings Company	August, 1870	H. V. Noel	C. R. Cunningham	Ottawa	December 31, 1895.
Ottawa Building and Loan Society	June 6, 1884	A. Smirle	C. A. Douglas	Ottawa	May 31, 1895.
Owen Sound, Grey and Bruce Loan and Savings Company	April 15, 1889	S. J. Parker	W. P. Telford	Owen Sound	December 31, 1895.
Owen Sound Building and Savings Society	April 1, 1889	George Inglis	Alfred J. Spencer	Owen Sound	October 31, 1895.
Central Canada Loan and Savings Company	April 1, 1884	George A. Cox	Fred. G. Cox	Peterborough	December 31, 1895.
Crown Savings and Loan Company	Jan. 30, 1882	John H. Fairbank	John Fraser	Petrolea	December 31, 1895.
Midland Loan and Savings Company	1873	John Mulligan	George M. Furby	Port Hope	December 31, 1895.
Security Loan and Savings Company	March 15, 1870	Thomas R Merritt	E. F. Duyer	St. Catharines	December 31, 1895.
Atlas Loan Company	August, 1877	Hon. Richard Harcourt	A. E. Wallace	St. Thomas	December 31, 1895.
Elgin Loan and Savings Company	May 1, 1879	D. McLarty	George Rowley	St. Thomas	December 31, 1895.
Southern Loan and Savings Company	1870	Wm. Mickleborough	J. W. Stewart	St. Thomas	December 31, 1895.
Southwestern Farmers and Mechanics' Loan Society	Feb 18, 1875	E. W. Gustin, M.D	W. E. Leonard	St. Thomas	December 31, 1895.
Star Loan Company	August 31, 1881	Hon. David Mills	D. M. Tait	St. Thomas	August 31, 1895.
Huron and Lambton Loan and Savings Company	November, 1877	James Flintoft	J. Cameron Douglas	Sarnia	December 31, 1895.
Industrial Mortgage and Savings Company	October 1889	James F. Lister, M.P	J. S. Symington	Sarnia	December 31, 1895.
Lambton Loan and Investment Company	1844	Charles Mackenzie	A. C. Clark	Sarnia	June 30, 1895.
British Mortgage Loan Company	October, 1877	Hon. Thomas Ballantyne	Wm. Buckingham	Stratford	December 31, 1895.

Stratford Building and Savings Society	August 22, 1889	M. F. Goodwin	D. Burritt	Stratford	September 30, 1895.
Ad Savings and Loan Company	February, 1893	R. S. Williams	Arthur E. Hill	Toronto	February 29, 1896.
Birkbeck Investment Security and Savings Company	July 1, 1893	Harvey P. Dwight	F. W. G. Fitzgerald	Toronto	April 30, 1896.
Bristol and West of England Canadian Land Mortgage and Investment Company	March 25, 1878	Sir George W. Edwards, T. Sutherland Stayner	Wm. Smith & Co.	Bristol, Eng	December 31, 1895.
			W. H. Mulkins	Toronto	
British Canadian Loan and Investment Company	July 1, 1877	A. H. Campbell	R. H. Tomlinson	Toronto	December 31, 1895.
Building and Loan Association	March 1, 1870	Larrett W. Smith, Q.C.	Walter Gillespie	Toronto	December 31, 1895.
Canada Landed and National Investment Company	1858	John L. Blaikie	Andrew Rutherford	Toronto	December 31, 1895.
Canada Permanent Loan and Savings Company	1855	J. Herbert Mason		Toronto	December 31, 1895.
Canadian Homestead Loan and Savings Association	Sept., 1886	John Hillock	A. J. Pattison	Toronto	September 30, 1895.
Canadian Mutual Loan and Investment Company	June 14, 1890	John J. Withrow	A. J. Jackson	Toronto	December 31, 1895.
Canadian Savings, Loan and Building Association	March 28, 1890	Daniel Rose	W. J. Hambly	Toronto	June 30, 1895.
City and County Loan Association	Jan. 26, 1889	Ambrose Kent	John C. Laidlaw	Toronto	December 21, 1895.
Credit Foncier Franco Canadian (Montreal)	January, 1881	G. Brodemann	W. E. Long	Toronto	December 31, 1895.
Dominion Building and Loan Association	May 1, 1890	J. R. Stratton, M.P.P.	F. M. Holland	Toronto	April 30, 1896.
Dovercourt Land, Building and Savings Company	Dec. 16, 1889	James Brandon	James T. Leckie	Toronto	December 31, 1895.
Equitable Savings, Loan and Building Association	Feb. 29, 1892	Henry O'Hara	Edward A. Taylor	Toronto	December 21, 1895.
Farmers' Loan and Savings Company	October, 1871	Wm. Mulock, M.P.	Geo. S. C. Bethune	Toronto	April 30, 1895.
Freehold Loan and Savings Company	May, 1859	C. H. Gooderham	Hon. S. C. Wood	Toronto	April 30, 1895.
Globe Savings and Loan Company	Feb. 9, 1892	William Bell	J. L. Kerr	Toronto	February 29, 1895.
Home Savings and Loan Company	April 25, 1877	Hon. Sir F. Smith	James Mason	Toronto	December 31, 1895.
Home and Land Investment Company	July 20, 1891	James Peter Murray	W. C. Kennedy	Toronto	December 31, 1895.
Imperial Loan and Investment Company	Sept. 14, 1869	James Thorburn, M.D.	E. H. Kertland	Toronto	December 31, 1895.
Imperial Trusts Company	March, 1889	Sir Leonard Tilley, C.B.	James S. Lockie	Toronto	December 31, 1895.
Land Security Company	December, 1873	Robert Jaffray	W. Innes Mackenzie	Toronto	December 31, 1895.
London and Canadian Loan and Agency Company	January 1, 1873	Col. Sir C. S. Gzowski	James F. Kirk	Toronto	August 31, 1895.
London and Ontario Investment Company	May 15, 1877	Hon. Sir F. Smith	Alfred M. Cosby	Toronto	June 30, 1895.
North British Canadian Investment Company	Oct. 14, 1876	Peter Sturrock	James L. Scarth	Toronto	December 31, 1895
North of Scotland Canadian Mortgage Company	Dec. 17, 1875	James W. Barclay	Osler and Hammond	Toronto	November 11, 1895.
Ontario Industrial Loan and Investment Company	Jan 5, 1880	William Booth	E. T. Lightbourn	Toronto	December 31, 1895.
People's Loan and Deposit Company	March, 1875	Hon. J. C. Aikins	Samuel W. Black	Toronto	December 31, 1895.
Provincial Building and Loan Association	June, 1892	George J. St. Leger	W. H. Auger	Toronto	February 29, 1896.
Provident Investment and Mortgage Guarantee Company	Nov. 3, 1893	Robert Jaffray	A. E. Ames	Toronto	September 30, 1895.
Real Estate Loan Company of Canada	December, 1879	John Smart	Benjamin Morton	Toronto	December 31, 1895
Scottish Ontario and Manitoba Land Company	Dec. 15, 1879	Hugh Wright	James L. Scarth	Toronto	December 31, 1895.
Sons of England Building, Loan and Savings Association	April 30, 1889	John Aldridge	George Clay	Toronto	June 30, 1895.
Star Savings and Loan Company	Sept. 1, 1894	J. T. Gilmour, M.D.	W. Pemberton Page	Toronto	December 31, 1895.
Toronto General Trusts Company	February, 1882	Hon. E. Blake, M.P.	J. W. Langmuir	Toronto	March 31, 1895.
Toronto Land and Investment Corporation	Feb. 22, 1886	G. R. R. Cockburn, M.P.	John C. Copp	Toronto	December 31, 1895.
Toronto Land and Loan Company	May 27, 1881	Arthur Harvey		Toronto	December 31, 1895.
Toronto Savings and Loan Company	Jan. 15, 1885		A. E. Ames	Toronto	December 31, 1895.
Trusts Corporation of Ontario	1889	Hon. J. C. Aikins	Alfred E. Plummer	Toronto	December 31, 1895.
Trust and Loan Company of Canada	October 1, 1851	Charles Morrison	W. E. B. Simpson	Toronto	September 30, 1895.
Union Loan and Savings Company	March, 1865	W. B. Geikie, M.D.	W. Maclean	Toronto	December 31, 1895.
Western Canada Loan and Savings Company	March, 1863	Hon. G. W. Allan	Walter S. Lee	Toronto	December 31, 1895.
York County Loan and Savings Company	Dec. 8, 1891	Joseph Phillips	Albert E. Nash	Toronto	December 31, 1895.
Ontario Permanent Building and Loan Association	Sept. 16, 1892	A. B. Welford, M.D.	R. W. Ball	Woodstock	November 30, 1895.
Oxford Permanent Loan and Savings Society	1865	William Grey	Malcolm Douglas	Woodstock	December 31, 1895.

LOAN AND INVESTMENT COMPANIES.

TABLE I. Statement of affairs showing the capital stock, liabilities and assets of 90 Loan and Investment Companies in the Province of Ontario for the year 1895, as required to be furnished by Chapter 169, section 83, R. S. O. 1887, and amended by Vict. 54, Chapter 38, section 23, or by provisions of special charters; also a miscellaneous summary of the business transacted by each company during the year.

Schedule for loan companies.	Barrie Loan, Barrie.	Hastings Loan, Belleville.	Royal Loan, Brantford.	Brockville Loan, Brockville.	Chatham Loan, Chatham.	East Lambton, Forest.	Huron and Bruce Loan, Goderich.	Guelph and Ontario, Guelph.	Hamilton Homestead, Hamilton.	Hamilton Mutual, Hamilton.
Capital Stock.	$	$	$	$	$	$	$	$	$	$
Capital authorized	250,000	250,000	500,000	500,000	1,000,000	500,000	500,000	1,000,000	1,000,000	600,000
Capital subscribed	250,000	225,300	500,000	250,000	352,000	100,100	208,550	720,000	286,332	545,800
Liabilities.										
Liabilities to stockholders:										
Stock fully paid up			500,000				153,500	348,350		
Stock on which has been paid	117,500	217,621		128,119	223,932	87,778	26,833	74,000	93,069	31,763
Accumulating stock								392		
Reserve fund	10,000	21,000	100,000	12,500	16,800	1,969		155,00		
Dividends declared and unpaid	3,525	6,496	15,000	3,834		2,183	4,505	16,910		
Contingent fund and unappropriated profits	2,856	8,943	8,533	1,857			4,112	12,095	39,246	14,476
Total	133,881	254,060	623,533	146,310	240,732	91,930	188,950	606,747	132,315	46,239
Liabilities to the public:										
Deposits	27,203	149,999	313,886	157,064	261,702	50,874	89,022	441,035		
Debentures payable in Canada	10,000		393,016		10,481			543,938		
Debentures payable elsewhere		48,667								
Interest on debentures due and accrued			5,545		223			11,216		
Interest on deposits due and accrued			1,275	5,719				6,603		
Owing to banks	914			53,433	1,177	4,180				
Other liabilities										
Total	38,117	198,666	713,722	216,216	273,583	55,054	89,022	1,002,792		
Assets.										
Secured loan assets:										
Real estate of—										
General borrowers	166,702	376,140	1,116,132	337,555	467,689	141,234	250,023	1,509,141	117,781	38,473
Directors and executive officers of company									3,680	
Held under power of sale	4,000	69,865	35,640					19,995		
Shareholders' stock		900	3,605	5,854		890	8, 150	7,306		
Directors and officers of company on their stock			3,144							
Otherwise secured				200		*4,431		1,088		
Total	170,702	446,905	1,158,521	343,609	467,689	146,555	258,173	1,537,530	121,461	38,473

Property assets:											
Municipal and school section securities, cash value			92,455					3,797			
Office furniture and fixtures		1,327		321	399	343	644		170		
Cash on hand	1,296	588	2,440	2,096	2,177	86	812		5,873		23
Cash in banks		3,906	28,839				4,374	35,804			2,829
Special deposit in banks											111
Office premises					10,600						
Real estate absolutely foreclosed			55,000	16,500	33,450		13,969	32,408			
Real estate otherwise acquired									2,050		
Other property									2,761		4,803
Total	1,296	5,821	178,734	18,917	46,626	429	19,799	72,009	10,854		7,766
Grand total *assets or liabilities*	171,998	452,726	1,337,255	362,526	514,315	146,984	277,972	1,609,539	132,315		46,239
Miscellaneous.											
Dividends declared in year — Rate per cent	6.	6.	6.	6.	6.	5.	5.	8.			‡
Dividends declared in year — Amount	7,050	12,924	30,000	7,644	13,331	4,341	9,010	33,819			
Loaned during the year	25,210	32,037	146,980	129,941	81,248	44,340	23,469	246,769	10,134		11,325
Received from borrowers (principal and interest)	21,414	52,306	*258,284	49,268	†94,782	12,152	37,816	386,165	16,871		6,919
Received from depositors	35,730	109,722	558,123	122,635	433,248	56,703	107,232	771,402			
Repaid depositors	34,602	130,255	575,698	80,780	433,217	32,729	108,217	819,372			
Debentures issued			164,317		7,375			231,602			
Debentures repaid			166,540		400			285,112			
Debentures to mature within one year	10,000		40,247		400			194,135			
Average rate of interest — For debentures	5.00	5.00	4.29		4.50			4.50			
Average rate of interest — For deposits	4.00	3.50	3.30	4.00	3.98	4.00	4.00	3.03			
Interest paid and accrued — On debentures	500	2,433	17,034		310			25,783			
Interest paid and accrued — On deposits	1,173	4,988	10,570	5,719	10,549	1,491	3,751	14,349			
Cost of management	899	3,314	6,564	1,523	4,301	650	1,465	9,658	1,434		557
Invested and secured by mortgage — In Ontario	170,702	446,005	1,151,772	336,518	467,689	141,234	250,023	1,529,136	121,461		38,475
Invested and secured by mortgage — Elsewhere				1,037							
Average interest on total amount secured by mortgage	6.75	6.38	5.69	6.50	6.37	6.00	6.00	6.03	6.00		5.50
Average interest on amount loaned on mortgage in year	6.50	6 00	5.56	6.50	6.15	6.00	5.75	5.59	6.00		5.50
Mortgages on which compulsory proceedings have been taken — Number		5	6		4		2	12			
Mortgages on which compulsory proceedings have been taken — Amount		24,958	13,733		5,738		5,000	29,462			
Value of mortgaged property held for sale	4,500	69,865	36,791					18,800			
Amount chargeable against such property	4,000	69,865	35,640					19,995			

* Accrued interest. ** Including $55,000 transferred to real estate. † Including $5,738 transferred to real estate. ‡ No dividend until maturity.

TABLE I. LOAN AND INVESTMENT COMPANIES.—*Continued.*

Schedule for loan companies.	Hamilton Provident, Hamilton.	Landed Banking, Hamilton.	Frontenac Loan, Kingston.	Ontario Building, Kingston.	Agricultural Savings, London.	Birkbeck Loan, London.	Canadian Savings, London.	Dominion Savings, London.	Huron and Erie Loan, London	London Loan, London.
Capital Stock.	$	$	$	$	$	$	$	$	$	$
Capital authorized	3,000,000	700,000	Unlimited	250,000	1,000,000	1,000,000	Unlimited	1,500,000	3,000,000	Unlimited
Capital subscribed	1,500,000	700,000	200,000	250,000	630,200	189,100	750,000	1,000,000	3,000,000	679,700
Liabilities.										
Liabilities to stockholders:										
Stock fully paid up	1,000,000		200,000	250,000		15,100			1,000,000	
Stock on which has been paid	100,000	669,600			619,050	2,631	729,150	932,200	400,000	659,800
Accumulating stock		10,432			8,245	11,666	3,308	577		2,573
Reserve fund	300,000	160,000	30,000		138,000		200,000	10,000	700,000	76,000
Dividends declared and unpaid	38,500	20,071	5,085	6,316	18,571				63,051	
Contingent fund and unappropriated profits	39,395	5,580	6,582	14,626	2,865	588	25,955	13,603	35,305	722
Total	1,477,895	865,683	241,667	270,942	786,731	29,985	958,413	956,380	2,198,356	739,095
Liabilities to the public:										
Deposits	894,510	542,093	266,591	218,936	552,512		718,241	622,875	1,168,287	461,387
Debentures payable in Canada	207,455	435,296			468,846		128,700	256,575	1,432,864	164,123
Debentures payable elsewhere	†1,070,277	169,834			182,349			389,879	1,548,444	99,279
Interest on debentures due and accrued	12,824	7,387			7,090		2,371	4,759	36,984	3,442
Interest on deposits due and accrued		1,354							7	
Owing to banks										
Other liabilities	20,829	1,430			1,138	400		225		
Total	2,205,895	1,157,394	266,591	218,936	1,211,935	400	849,312	1,274,313	4,186,586	728,231
Assets.										
Secured loan assets:										
Real estate of—										
General borrowers	3,138,613	1,752,802	297,210	328,643	1,866,139	23,424	1,591,170	1,864,000	6,073,220	1,389,585
Directors and executive officers of company		1,809	44,071	6,366						
Held under power of sale	224,062	97,079	38,751	37,916	24,781		56,777	215,293	25,400	10,315
Shareholders' stock	6,334		7,938	5,544	3,842	5,450	37,725	89,068		45,706
Directors and officers of company on their stock			26,970	5,208			725			2,629
Otherwise secured			1,580	35,840			5			
Total	3,369,009	1,851,690	416,520	419,517	1,894,762	28,874	1,686,402	2,168,361	6,098,620	1,448,235

Property assets—											
Municipal and school section securities, cash value	53,597	43,021		27,185	1,339				34,701	1,226	
Office furniture and fixtures			192	87	500			1,000		300	
Cash on hand	2,243	2,382	308	33	3,041	736		568	6,284	1,457	
Cash in banks	104,915	66,162	14,192	24,830	67,562	775	26,932	60,764	46,653	13,108	
Special deposit in banks	50,000	20,000	5,000	11,782			70,391		15,366		
Office premises	90,526		4,834		28,000		24,000		20,000		
Real estate absolutely foreclosed		19,545	17,997	5,672							
Real estate otherwise acquired	7,500	20,287	12,812		2,629						
Other property			38,943	772	863				*163,318		
Total	314,781	171,387	91,738	70,361	103,901	1,511	121,323	62,332	286,322	19,091	
Grand total assets or liabilities	3,083,790	2,023,077	508,258	489,878	1,998,666	30,385	1,807,725	2,240,693	6,384,942	1,467,326	
Miscellaneous.											
Dividends declared in year—Rate per cent	7.	6.	5.	5.	6.		6½	5.	9.	6.	
Dividends declared in year—Amount	77,000	40,958	10,000	12,509	37,615	1,872	17,771	46,610	126,000	39,771	
Loaned during the year	576,685	294,739	38,467	43,912	245,562	15,436	160,517	357,910	779,775	208,109	
Received from borrowers (principal and interest)	775,497	367,868	54,076	70,734	278,195	2,322	294,150	585,199	1,058,339	372,795	
Received from depositors	†724,697	†975,180	‡427,475	363,804	556,077		948,878	869,981	‡1,878,563	1,077,996	
Repaid depositors	697,257	894,687	419,494	386,604	616,016		932,290	881,263	2,108,076	1,215,276	
Debentures issued	78,317	59,018			365,330		59,900	315,101	1,148,539	112,373	
Debentures repaid	138,199	56,239			244,760		28,040	438,711	923,432	121,593	
Debentures to mature within one year	77,827	165,778			214,286		31,100	197,690	904,589	98,687	
Average rate of interest—For debentures	4 03	4 56			4 43		4 53	4 62	4 12	4 43	
Average rate of interest—For deposits	3 41	3 56	3 55	3 50	3 68		4 07	4 24	3 58	3 66	
Interest paid and accrued—On debentures	63,310	27,506			26,222		5,107	30,407	127,456	19,042	
Interest paid and accrued—On deposits	30,135	17,888	9,629	8,673	21,490		28,369	25,571	42,673	16,473	
Cost of management	29,177	14,863	3,727	2,513	12,573	4,596	10,085	12,073	33,618	8,200	
Invested and secured by mortgage—In Ontario	2,922,641	1,542,443	299,144	372,925	1,890,920	23,121	1,617,947	2,079,293	6,098,620	1,396,888	
Invested and secured by mortgage—Elsewhere	440,934	309,247	80,888							3,012	
Average interest on total amount secured by mortgage	5 91	6 49	5 38	6 03	6 10	10 80	6 10	6 14	5 99	6 00	
Average interest on amount loaned on mortgage in year	6 10	6 19	5 91	5 50	5 93	10 80	5 86	6 09	5 80	6 00	
Mortgages on which compulsory proceedings have been taken—Number	18	28	1	3	9		10	28	35	27	
Mortgages on which compulsory proceedings have been taken—Amount	44,117	69,317	1,059	7,184	31,497		11,864	21,900	97,740	41,989	
Value of mortgaged property held for sale	224,062	97,079	37,000	27,800	24,781		54,300	215,293	25,400	15,077	
Amount chargeable against such property	224,062	97,079	38,754	37,946	24,781		56,777	215,293	25,400	10,315	

* 6 per cent. on Instalment Stock and 10 per cent. on Prepaid Stock. † Including $378,283 Debenture Stock. ‡ Including interest credited and capitalized.
** Dominion securities $60,950 and Loan Co. debentures, $102,368

TABLE I. LOAN AND INVESTMENT COMPANIES.—*Continued.*

Schedule for loan companies.	Ontario Loan, London.	People's Building, London.	Niagara Falls Building and Savings, Niagara Falls.	Orangeville Building, Orangeville.	Ontario Loan, Oshawa.	Home Building and Savings, Ottawa.	Metropolitan Loan, Ottawa.	Ottawa Building, Ottawa.	Owen Sound, Gray and Bruce, Owen Sound.	Owen Sound Building and Savings, Owen Sound.
Capital Stock.	$	$	$	$	$	$	$	$	$	$
Capital authorized	Unlimited	5,000,000	260,000	50,000	300,000	1,000,000	320,000	Unlimited	500,000	1,000,000
Capital subscribed	2,000,000	683,100	117,971	24,500	300,000	313,000	320,000	123,600	427,650	126,250
Liabilities.										
Liabilities to stockholders :										
Stock fully paid up	1,000,000		2,470	18,350	299,000				111,550	
Stock on which has been paid	200,000	*44,428	12,567	4,218	431	53,614	310,560	81,576	69,170	
Accumulating stock		†52,170					32			43,688
Reserve fund	462,000	540		495	75,000		30,000		5,000	
Dividends declared and unpaid	42,000			60			7,765		5,409	
Contingent fund and unappropriated profits	585	‡7,735	849	1,098	19,000	‡6,961	5,820	‡42,553	125	‡13,185
Total	1,704,585	104,873	15,886	24,221	393,431	60,575	354,177	124,129	191,254	56,873
Liabilities to the public :										
Deposits	520,701				270,840		32,421		49,150	9,439
Debentures payable in Canada	224,751				194,600				89,330	
Debentures payable elsewhere	1,738,888									
Interest on debentures due and accrued	20,768								1,551	
Interest on deposits due and accrued									1,290	186
Owing to banks			1		5,900	1,906				896
Other liabilities				58					6,490	
Total	2,505,108		1	58	471,340	1,906	32,421		147,811	10,521
Assets.										
Secured loan assets :										
Real estate of—										
General borrowers	3,594,809	84,447	14,820	19,198	699,094	58,500	237,804	112,400	334,277	59,538
Directors and executive officers of company										1,600
Held under power of sale	56,177	3,758		4,804	20,000		86,565			
Shareholders' stock	38,446	5,585			16,658	2,700	3,411	10,345		2,681
Directors and officers of company on their stock	12,505						1,463			253
Otherwise secured	§30,118			106			105		7	
Total	3,732,055	93,790	14,820	24,108	735,752	61,200	329,348	122,745	334,284	64,072

Property assets:											
Municipal and school section securities, cash value	23,071										
Office furniture and fixtures		170	218		400	25	460		25		
Cash on hand					200				238	258	
Cash in banks	118,504	701	849	171	10,519		36,200	1,384	4,440		
Special deposit in banks	150,856	10,065			50,000						
Office premises	72,000				11,000		20,590				
Real estate absolutely foreclosed	17,000				30,000					1,935	
Real estate otherwise acquired	12,500				20,000					1,093	
Other property	883,707	144			6,900	1,256			78	36	
Total	477,638	11,083	1,067	171	129,019	1,281	57,250	1,384	4,781	3,322	
Grand total assets or liabilities	4,269,693	104,873	15,887	24,279	864,771	62,481	386,598	124,129	339,065	67,394	
Miscellaneous.											
Dividends declared in year { Rate per cent	7.	* 9 and 11½	9.	5.	6.		6		6.	9.	
Dividends declared in year { Amount	84,000	7,622	785	1,118	17,966		18,635		10,754	3,635	
Loaned during the year	506,114	44,217	11,960	3,775	49,591	19,545	35,728	**	69,495	20,349	
Received from borrowers (principal and interest)	748,279	11,470	2,004	4,610	††159,873		110,255		41,706	12,133	
Received from depositors	667,795				219,948		30,642		121,813	13,436	
Repaid depositors	613,471				216,143		61,083		110,790	10,018	
Debentures issued	394,776				177,000				56,585		
Debentures repaid	412,386				198,500				7,560		
Debentures to mature within one year	355,201								46,080		
Average rate of interest { For debentures	3.98				4.50				4.96		
Average rate of interest { For deposits	3.85				3.75		3.50		4.40	4.30	
Interest paid and accrued { On debentures	78,569				9,742				3,995		
Interest paid and accrued { On deposits	19,439				11,462		1,468		2,845	398	
Cost of management	25,925	5,579	535	143	5,542	1,038	2,091	557	1,876	905	
Invested and secured by mortgage { In Ontario	3,560,320	88,205	14,820	24,002	719,094	58,500	324,369	112,400	334,277	61,138	
Invested and secured by mortgage { Elsewhere	90,656										
Average rate of interest on total amount secured by mortgage	6 04	†6 00	6 00	5 04	5.75	8.00	6 50		6 31	8.08	
Average interest on amount loaned on mortgage in year	5 95	†6 00	6 00	6 20	6.00	8.00	6 25		6 05	6.95	
Mortgages on which compulsory proceedings have been taken { Number	17	2		3	6		4		2	2	
Mortgages on which compulsory proceedings have been taken { Amount	54,360	3,400		1,037	28,000		13,443		5,800	1,367	
Value of mortgaged property held for sale	50,178	3,900		4,905	20,000		95,000				
Amount chargeable against such property	58,177	3,758		4,804	20,000		86,565				

* Prepaid stock. † Instalment stock. ‡ Including profits on accumulating stock. § Loan Company debentures. Largely moneys held back to complete building loans. * 9 per cent. on Prepaid and 11½ per cent. on Instalment Stock. **Stock matured May, 1895. Society ceased to do business. †† Including $33,538 township securities, classified as property assets. ‡‡ And premiums 1½ per cent.

TABLE I. LOAN AND INVESTMENT COMPANIES.—*Continued.*

Schedule for loan companies.	Central Canada Loan, Peterborough.	Crown Savings, Petrolea.	Midland Loan, Port Hope.	Security Loan, St. Catharines.	Atlas Loan, St. Thomas.	Elgin Loan, St. Thomas.	Southern Loan, St. Thomas.	South-Western Farmers' and Mechanics', St. Thomas.	Star Loan, St. Thomas.	Huron and Lambton Loan, Sarnia.
Capital Stock.	$	$	$	$	$	$	$	$	$	$
Capital authorized	5,000,000	1,000,000	560,000	300,000	2,000,000	625,000	Unlimited	Unlimited	270,000	1,000,000
Capital subscribed	2,500,000	200,000	560,000	275,000	1,000,000	625,000	400,000	193,800	270,000	399,200
Liabilities.										
Liabilities to stockholders:										
Stock fully paid up	937,500	146,700	310,000	.....	.....	.....	400,000	141,150	199,300	305,150
Stock on which has been paid	312,500	23,658	50,000	274,256	293,065	225,900	.....	21,325	.....	9,620
Accumulating stock	.....	.....	.....	.....	10,000	19,000	52,000	4	29,465	15,109
Reserve fund	325,000	19,500	80,000	.....	.....	.....	.....	14,000	15,000	46,000
Dividends declared and unpaid	18,247	.....	10,926	6,856	.....	.....	.....	4,234	.....	.....
Contingent fund and unappropriated profits	34,025	42	23,110	3,316	859	799	1,509	1,458	6,186	3,926
Total	1,627,272	189,900	474,036	284,428	303,924	245,699	453,509	182,171	249,951	379,805
Liabilities to the public:										
Deposits	760,535	61,655	317,435	324,388	211,225	162,843	403,995	199,472	191,821	267,811
Debentures payable in Canada	862,616	9,243	608,685	36,587	81,900	.....	.....	65,850	.....	10,440
Debentures payable elsewhere	2,058,944	.....	.....	.....	1,460	.....	.....	.....	.....	.....
Interest on debentures due and accrued	25,939	.....	17,604	.....	.....	.....	.....	1,255	.....	121
Interest on deposits due and accrued	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Owing to banks	.....	.....	.....	.....	6,493	.....	.....	.....	.....	.....
Other liabilities	**119,414	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	3,827,448	70,898	943,724	360,975	301,078	162,843	403,995	266,577	191,821	278,372
Assets.										
Secured loan assets:										
Real estate of—										
General borrowers	2,522,997	221,523	1,233,447	515,439	584,407	334,775	808,642	407,856	396,901	489,183
Directors and executive officers of company	.....	2,000	.....	.....	.....	2,369	.....	.....	.....	22,053
Held under power of sale	.....	573	71,232	57,880	.....	47,650	9,215	15,400	16,636	12,852
Shareholders' stock	.....	.....	7,237	4,441	7,999	8,481	10,660	.....	11,143	28,863
Directors and officers of company on their stock	.....	.....	5,649	.....	.....	824	1,102	599	.....	10,303
Otherwise secured	*885,991	.....	216	6,353	.....	.....	.....	.....	585	.....
Total	3,408,988	224,096	1,317,781	584,113	592,406	394,079	829,619	423,855	425,265	563,234

Property assets :											
Municipal and school section securities, cash value	466,394	35,585	.....	.....	.....	.....	.....	1,909	.....	.....	67,103
Office furniture and fixtures	3,500	14	.....	240	.....	.....	.....	100	.....	.....	125
Cash on hand	1,586	.....	800	.....	3,781	.....	.....	.....	.....	.....	8,117
Cash in banks	56,733	1,103	79,072	19,583	59	.....	.....	22,816	13,793	.....	12,098
Special deposit in banks	.....	.....	.....	40,000	.....	11,996	13,060	.....	.....	.....	.....
Office premises	40,699	.....	7,000	.....	8,756	.....	.....	.....	2,500	.....	7,500
Real estate absolutely foreclosed	60,657	.....	10,629	667	.....	.....	8,199	.....	.....	.....	.....
Real estate otherwise acquired	.....	.....	.....	.....	.....	2,467	6,626	68	.....	.....	.....
Other property	*1,416,163	.....	2,478	800	.....	.....	.....	.....	214	.....	.....
Total	2,045,732	36,702	99,979	61,290	12,596	14,463	27,885	24,893	16,507	94,943	
Grand total *assets or liabilities*	5,454,720	260,798	1,417,760	645,403	605,002	408,542	857,504	448,748	441,772	658,177	
Miscellaneous.											
Dividends declared in year { Rate per cent	6.	5.	6.	5½	6.	6	6.	6.	6.	6.	
Dividends declared in year { Amount	72,247	8,432	21,600	15,084	17,235	13,350	24,000	9,194	13,569	19,795	
Loaned during the year	789,331	31,773	133,424	136,816	118,633	94,348	182,208	136,700	76,770	99,929	
Received from borrowers (principal and interest)	1,167,292	35,137	227,331	108,758	95,625	78,795	‡238,053	78,474	63,332	†143,675	
Received from depositors	1,141,923	43,991	369,994	367,480	330,428	197,676	439,798	233,108	172,840	313,678	
Repaid depositors	1,041,727	30,714	353,080	290,569	304,695	182,130	417,356	206,628	152,114	310,153	
Debentures issued	550,921	400	315,364	22,327	26,160	.....	.....	42,250	.....	3,090	
Debentures repaid	535,363	4,009	316,363	17,406	15,800	.....	.....	17,350	.....	.....	
Debentures to mature within one year	383,805	3,300	315,741	16,142	9,500	.....	.....	33,650	.....	.....	
Average rate of interest { For debentures	4.32	4.75	4.54	4.50	4.76	.....	.....	4.50	.....	4.50	
Average rate of interest { For deposits	4.09	3.30	3.86	3.50	4.25	4.25	3.98	4.00	4.13	4.00	
Interest paid and accrued { On debentures	115,134	509	28,006	1,418	4,237	.....	.....	2,431	.....	461	
Interest paid and accrued { On deposits	30,104	1,793	11,702	9,519	8,334	6,613	15,549	7,239	7,212	10,374	
Cost of management	32,641	1,502	6,818	4,404	3,382	2,379	4,536	2,536	2,226	3,852	
Invested and secured by mortgage { In Ontario	2,522,997	224,096	1,304,679	573,319	584,407	384,774	817,857	423,256	413,537	524,068	
Invested and secured by mortgage { Elsewhere	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Average interest on total amount secured by mortgage	5 89	6.16	6 30	6.20	6.25	6.00	6.10	6.04	6.00	6 00	
Average interest on amount loaned on mortgage in year	5 76	5.75	5.94	6.00	6.31	6 00	5.80	5.72	6.00	6.00	
Mortgages on which compulsory proceedings have been taken { Number	10	3	4	1	.....	.....	18	11	3	4	
Mortgages on which compulsory proceedings have been taken { Amount	28,775	1,644	8 000	394	.....	.....	30,846	25,087	8,097	7,348	
Value of mortgaged property held for sale	.....	573	60,000	57,880	.....	48,000	9,215	15,400	20,000	11,488	
Amount chargeable against such property	.....	573	71,232	57,880	.....	47,630	9,215	15,400	16,636	12,832	

* Stocks, bonds and debentures. ** Including $117,322 to complete loans in progress. † Including $20,894 municipal securities redeemed, classified as property assets.
‡ Including $16,524 in mortgages written off and $14,824 transferred to real estate account.

TABLE I. LOAN AND INVESTMENT COMPANIES.—*Continued.*

Schedule for loan companies.	Industrial Mortgage, Sarnia.	Lambton Loan, Sarnia.	British Mortgage, Stratford.	Stratford Building, Stratford.	Aid Saving and Loan, Toronto.	Birkbeck Investment, Toronto.	Bristol and West of England, Toronto.	British Canadian, Toronto.	Building and Loan, Toronto.	Canada Landed and National Investment, Toronto.
Capital Stock.	$	$	$	$	$	$	$	$	$	$
Capital authorized	500,000	1,000,000	5,000,000	Unlimited	2,000,000	5,000,000	2,433,333	5,000,000	750,000	4,000,000
Capital subscribed	280,000	500,000	450,000	178,600	319,800	1,500,000	680,117	2,000,000	750,000	2,008,000
Liabilities.										
Liabilities to stockholders :										
Stock fully paid up			161,800	8,200					750,000	
Stock on which has been paid	255,935	499,156	152,957			153,918	136,023	398,510		1,004,000
Accumulating stock				39,293	23,140	53,512				
Reserve fund	28,194	250,000	84,000				21,900	120,000	112,000	350,000
Dividends declared and unpaid	7,650		11,010	296				13,948	18,750	30,855
Contingent fund and unappropriated profits	500	6,776	660	6,831	2,226	8,251	6,239	6,773	33,239	30,585
Total	292,279	755,932	410,427	54,670	25,366	215,681	164,162	539,231	913,989	1,415,440
Liabilities to the public :										
Deposits	264,555	471,205	508,926					2,239	165,177	
Debentures payable in Canada	*77,349	166,740	35,000					266,976	141,658	238,348
Debentures payable elsewhere							924,425	1,458,131	552,831	2,634,998
Interest on debentures due and accrued	1,451	3,470	66				9,524	15,923		16,328
Interest on deposits due and accrued	7,996		19,658							
Owing to banks	9,452	11,784	8,408	5,000	203					1,052
Other liabilities				843		††53,080	4,551	10,762	537	3,495
Total	360,783	653,199	572,058	5,843	203	53,080	938,500	1,754,031	860,203	2,944,221
Assets.										
Secured loan assets : —										
Real estate of —										
General borrowers	593,837	1,245,023	933,735	51,039	18,600	225,099	664,517	1,953,641	1,243,183	3,775,247
Directors and executive officers of company		1,983	7,900	3,700						
Held under power of sale	1,000	27,262	25,790				296,507	179,448	160,860	268,863
Shareholders' stock	12,084	20,152	569	3,580	2,490	1,083		500	7,829	
Directors and officers of company on their stock			3,500	200	600					
Otherwise secured	15 630				170			54,911		
Total	622,551	1,294,420	971,485	58,519	21,860	226,182	961,024	2,188,500	1,411,872	4,044,110

Property assets:											
Municipal and school section securities, cash value		49,711						54,910		191,568
Office furniture and fixtures	850	1,000				597		1,600		
Cash on hand	4,661	8,000		352			13	1,498	323	1,621
Cash in banks				1,380		9,446	941	31,695	38,535	54,336
Special deposit in banks	25,000	50,000			3,709				20,000	
Office premises		6,000	11,000				48,000		80,000	40,000
Real estate absolutely foreclosed							18,507		208,486	
Real estate otherwise acquired									14,297	
Other property				262		**32,536	74,177	15,059	679	28,026
Total	30,511	114,711	11,000	1,994	3,709	42,579	141,638	104,762	362,320	315,551
Grand total *assets or liabilities*	653,062	1,409,131	982,485	60,513	25,569	268,761	1,102,662	2,293,262	1,774,192	4,359,661
Miscellaneous.										
Dividends declared in year { Rate per cent.	6.	8.	7.	6. and 5.	8½.			7.	5.	6.
Dividends declared in year { Amount	14,963	39,926	22,017	2,473	1,452			27,896	37,500	60,240
Loaned during the year	173,304	127,183	271,452	22,732	15,070	‖161,479	3,085	177,144	68,050	232,878
Received from borrowers (principal and interest)	117,634	225,917	323,066	14,183	895	§15,520	143,411	301,956	165,924	573,600
Received from depositors	369,123	†418,265	512,033						274,799	
Repaid depositors	309,070	421,662	524,293					8,000	279,318	
Debentures issued	22,600	29,850	35,000				12,167	320,905	91,975	539,677
Debentures repaid	28,300	31,335					124,392	262,135	98,873	619,140
Debentures to mature within one year	17,457	76,995	35,000				248,155	265,481	116,047	529,350
Average rate of interest { For debentures	4.50	4.25	4.50				4.04	3½ to 5	4.31	4.10
Average rate of interest { For deposits	3.75	3.71	3.50					4.00	3.15	
Interest paid and accrued { On debentures.	5,004	7,086	66				40,093	72,945	29,400	123,655
Interest paid and accrued { On deposits	8,123	17,542	19,658					265	5,401	
Cost of management	3,138	6,235	6,510	401	‡1,579	5,700	9,622	17,096	12,372	31,788
Invested and secured by mortgage { In Ontario	594,837	1,247,882	967,425	54,739	18,600	225,099	961,024	1,743,214	1,254,708	3,134,781
Invested and secured by mortgage { Elsewhere		26,386						389,875	149,335	909,329
Average interest on total amount secured by mortgage	6 00	6.10	6.00	7.00	8.00		6.25	5.94	5.40	6.50
Average interest on amount loaned on mortgage in year	5.75	6.00	5.95	7.00	8.00		6.00	6.47	6.00	6.00
Mortgages on which compulsory proceedings have been taken { Number		17	7			1	22	14	12	29
Mortgages on which compulsory proceedings have been taken { Amount		30,657	15,530			800	37,450	92,992	35,412	47,925
Value of mortgaged property held for sale	1,000	27,262	25,790				300,000	180,600	160,860	268,863
Amount chargeable against such property	1,000	27,262	25,790				296,507	179,448	160,860	268,863

*In the return for 1894 the debentures included $5,500 which should have been deposits. **Including $31,700 due on stock. †Including interest accrued and capitalized. ††To complete loans in progress. ‡ Not including admission fees. § Principal applied to accumulating stock. ‖ Including $53,080 uncompleted loans as above.

TABLE I. LOAN AND INVESTMENT COMPANIES.—*Continued.*

Schedule for loan companies.	Canadian Homestead, Toronto.	Canadian Mutual, Toronto.	Canada Permanent, Toronto.	Canadian Savings, Loan and Building, Toronto.	City and County Loan, Toronto.	Credit-Foncier Franco-Canadian, Toronto.	Dominion Building and Loan, Toronto.	Dovercourt Land, Toronto	Equitable Savings, Loan and Building, Toronto.	Farmers' Loan, Toronto.
Capital Stock.	$	$	$	$	$	$	$	$	$	$
Capital authorized	1,500,000	50,000,000	5,000,000	5,000,000	500,000	4,784,689	10,000,000	500,000	5,000,000	1,057,250
Capital subscribed	*370,400	3,883,400	5,000,000	122,000	55,700	4,784,689	2,944,475	64,550	857,600	1,057,250
Liabilities.										
Liabilities to stockholders:										
Stock fully paid up	6,200	.....	2,000,000	.....	31,300	.....	48,550	.....	.....	500,090
Stock on which has been paid	7,772	243,022	600,000	16,553	7,690	1,196,172	168,161	63,650	.....	111,430
Accumulating stock	102,855	504,369	.....	.....	.....	.....	597,633	.....	83,809	.....
Reserve fund	10,000	7,016	1,450,000	.....	612	165,022	.....	25,000	.....	162,480
Dividends declared and unpaid	.....	28,640	104,125	848	1,759	952	.....	.....	.....	21,400
Contingent fund and unappropriated profits	14,155	†76,042	121,514	.....	.....	163,657	†130,770	10,545	†4,420	.....
Total	140,982	859,089	4,275,639	17,401	41,361	1,525,803	945,114	99,195	88,229	795,310
Liabilities to the public:										
Deposits	6,147	‡796	764,750	.....	.....	.....	.....	.....	.....	407,620
Debentures payable in Canada	.....	.....	320,283	.....	.....	73,868	.....	.....	.....	253,143
Debentures payable elsewhere	.....	.....	§6,492,586	.....	.....	6,560,668	.....	.....	.....	748,931
Interest on debenture due and accrued	.....	.....	41,420	.....	.....	15,613	.....	.....	.....	22,285
Interest on deposits due and accrued	.....	.....	137,569	.....	.....	.....	.....	.....	.....	.....
Owing to banks	.....	.....	.....	.....	2,490	.....	62,502	.....	.....	.....
Other liabilities	335	.....	5,216	.....	.....	129,747	.....	9,229	.....	.....
Total	6,482	796	7,761,824	.....	2,490	6,779,896	62,502	9,229	.....	1,431,979
Assets.										
Secured loan assets:										
Real estate of—										
General borrowers	106,492	694,404	10,487,410	15,595	27,508	7,293,547	954,032	49,834	70,001	1,954,210
Directors and executive officers of company	.....	2,150	.....	.....	463	.....	.....	.....	.....	.....
Held under power of sale	7,573	25,781	855,097	.....	2,759	.....	.....	.....	.....	247,740
Shareholders' stock	.....	32,870	15,473	.....	2,838	.....	24,260	.....	1,125	14,560
Directors and officers of company on their stock	.....	3,470	.....	.....	471	.....	.....	.....	.....	.....
Otherwise secured	28,544	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	142,609	758,675	11,357,980	15,595	34,039	7,293,547	978,292	49,834	71,126	2,216,510

Property assets:											
Municipal and school section securities, cash value			152,658								
Office furniture and fixtures	500	2,539			120		1,301		235	194
Cash on hand			374	1,806	33	300	4	12	5,483	2,155
Cash in banks	1,714	66,730	317,592			524,828		187	405	7,117
Special deposit in banks		4,477								
Office premises			194,875		9,659	32,637				
Real estate absolutely foreclosed						135,492	27,945			
Real estate otherwise acquired	1,496							43,361		
Other property	1,145	27,464	13,984			§§318,895	74	15,030	10,980	1,313
Total	4,855	101,210	679,483	1,806	9,812	1,012,152	29,324	58,590	17,103	10,779
Grand total *assets or liabilities*	147,464	859,885	12,037,463	17,401	43,851	8,305,699	1,007,616	108,424	88,229	2,227,289
Miscellaneous.										
Dividends declared in year — Rate per cent.	5.		9.	6.	5.	6½		*2½	*a*	7.
Dividends declared in year — Amount	448	103,572	234,000	848	1,759	77,181	*b*86,074	1,591	4,361	42,800
Loaned during the year	54,780	344,491	1,494,569	910	4,496	683,416	365,480	*c*	61,281	72,926
Received from borrowers (principal and interest)	*d*50,426	89,243	2,354,947	368	2,650	1,020,457	130,913		6,595	214,052
Received from depositors	6,256	4,834	139,510							176,789
Repaid depositors	6,708	5,303	163,276							245,171
Debentures issued			353,976							96,327
Debentures repaid			282,110			63,578				40,487
Debentures to mature within one year			1,090,512			63,578				116,343
Average rate of interest — For debentures			3.97			3 50				4.25
Average rate of interest — For deposits	4.00	4 00	3.62							3 50
Interest paid and accrued — On debentures			313,465			312,216				42,733
Interest paid and accrued — On deposits	246	28	32,739							17,107
Cost of management	4,240	67,943	90,254	909	543	39,119	11,791	1,826	5,616	15,899
Invested and secured by mortgage — In Ontario	114,065	97,945	8,328,947	15,595	30,730	1,030,480	230,790	49,834	34,526	2,182,355
Invested and secured by mortgage — Elsewhere		624,390	3,013,560			6,263,067	723,242		35,475	19,595
Average interest on total amount secured by mortgage	6 00	10.80	6 00	6.00	6 50	5.75	10.25	7.00	*e*6.00	6 25
Average interest on amount loaned on mortgage in year	6 00	10.80	6.50	6.00	6.50	5.75	10.00	7.00	*e*6.00	6.00
Mortgages on which compulsory proceedings have been taken — Number	1	15	221				13			
Mortgages on which compulsory proceedings have been taken — Amount	2,000	13,725	485,369				9,100			
Value of mortgaged property held for sale	7,573	43,690	973,409		5,000					415,602
Amount chargeable against such property	7,573	25,781	855,097		2,759					247,740

* Including $90,000 in permanent stock. † Including profit on accumulating stock. ‡ Deposit account in 1894 should have been $1,265. § Including $973,333 of debenture stock at 4 per cent. §§ Including $189,465 in Provincial securities. 8 per cent. on prepaid stock and 12 per cent. on instalment stock. • For 6 months only. *a* 10 per cent. on instalment stock and 7½ per cent. on prepaid stock. *b* Including profits added to value of shares. *c* Mortgages are for balances on sales of land. *d* Including matured shares applied to reduction of loans. *e* And 40 cents per month premium per $100. ‡ Statement for 17 months

TABLE I. LOAN AND INVESTMENT COMPANIES.—*Continued.*

Schedule for loan companies.	Freehold Loan, Toronto.	Globe Savings and Loan, Toronto.	Home Savings, Toronto.	House and Land Investment, Toronto.	Imperial Loan, Toronto.	Imperial Trusts, Toronto.	Land Security, Toronto.	London and Canadian, Toronto.	London and Ontario, Toronto.	North British Canadian, Toronto.
Capital Stock.	$	$	$	$	$	$	$	$	$	$
Capital authorized	3,800,000	10,000,000	2,000,000	200,000	1,000,000	500,000	5,000,000	5,000,000	3,000,000	2,433,333
Capital subscribed	3,223,500	2,872,550	2,000,000	6,750	839,850	400,000	1,382,300	5,000,000	2,750,000	2,433,333
Liabilities.										
Liabilities to stockholders :										
Stock fully paid up	843,000			6,750	629,386					
Stock on which has been paid	476,100	208,003	200,000		86,634	95,295	644,129	700,000	550,000	486,667
Accumulating stock		231,431								*v*12,288
Reserve fund	659,550	2,263	190,000		160,000		204,962	*s*410,000	160,000	111,933
Dividends declared and unpaid	52,764		7,000		25,061	4,765		28,000	16,500	7,752
Contingent fund and unappropriated profits	45,332	34,982	18,334	5,505	25,960	5,849	4,527	4,524		30,437
Total	2,076,746	476,679	415,334	12,255	927,041	105,909	853,618	1,142,524	726,500	649,077
Liabilities to the public :										
Deposits	473,377	7,184	1,910,421		38,253	*	55,290			11,569
Debentures payable in Canada	457,378	21,900			142,750		314,380	8,700	517,898	
Debentures payable elsewhere	2,969,095				1,000,330		788,303	‡3,535,113	1,606 512	‖1,701,085
Interest on debentures due and accrued	61,952	40			15,946		7,154	25,175	18,198	10,735
Interest on deposits due and accrued	8,570	72	59,526				829			67
Owing to banks				240			5,803	42,976		
Other liabilities		‡‡13,792	2,500	1,448		†238,700	23,539	28,675	1,667	7,238
Total	3,970,372	42,988	1,972,447	1,688	1,197,279	238,700	1,195,298	3,640,639	2,144,275	1,730,694
Assets.										
Secured loan assets :										
Real estate of—										
General borrowers	5,116,073	436,316	776,113		1,849,318	17,871	684,947	3,396,761	2,591,199	1,797,958
Directors and executive officers of company			24,020							4,000
Held under power of sale	341,629	950	29,608		130,000		14,300	371,655	110,183	352,996
Shareholders' stock	10,936	2,091	3,625		46,505		17,597			
Directors and officers of company on their stock			9,708							
Otherwise secured		*y*61,763	*x*1,349,809			*y*23,139	*y*57,365	*y*278,087		
Total	5,468,638	501,120	2,192,883		2,025,823	41,010	774,209	4,046,503	2,701,382	2,154,954

Property assets :											
Municipal and school section securities, cash value	100		521			11,083		502,043	80,055	8,123
Office furniture and fixtures	14,946	977	1,788			882	870		1,114	298
Cash on hand	7,461		2,645		130	178			281	1,089
Cash in banks	10,584	5,595	161,891	5	98,367	3,601	1,344	27,369	47,107	100,262
Special deposit in banks	55,000	5,518								
Office premises	354,076		26,653					120,000		
Real estate absolutely foreclosed	97,737	2,652						86,054	1,950	73,748
Real estate otherwise acquired	34,460		1,400				1,264,076		37,030	
Other property	4,116	3,805		*13,938		‡287,855	8,417	1,194	1,856	41,297
Total	578,480	18,547	194,898	13,943	98,497	303,599	1,274,707	736,660	169,393	224,817
Grand total *assets* or *liabilities*	6,047,118	519,667	2,387,781	13,943	2,124,320	344,609	2,048,916	4,783,163	2,870,775	2,379,771
Miscellaneous.										
Dividends declared in year { Rate per cent.	8.	6.	7.		7.	5.	3.	8.	6½.	4.
Dividends declared in year { Amount	107,045	16,214	14,000		50,004	4,765	16,514	56,000	35,750	19,467
Loaned during the year	617,097	248,511	2,823,146		83,131	188,974	99,559	395,407	79,478	103,578
Received from borrowers (principal and interest)	919,711	55,159	2,956,970		188,630	385,902	*384,503	735,260	337,162	278,610
Received from depositors	305,184	9,269	2,618,349		22,342	†	114,906			5,712
Repaid depositors	487,217	4,916	2,636,459		42,240	†	226,600			7,067
Debentures issued	796,233	21,900			157,717		524,222	‡703,674	201,479	*p*124,294
Debentures repaid	787,203				78,050		618,162	‡606,908	228,811	221,273
Debentures to mature within one year	668,323				333,470		230,294	‡830,375	631,759	243,966
Average rate of interest { For debentures	4.11	5.00			3.75		4.25	4.05	4.27	3.75
Average rate of interest { For deposits	3.52	4.00	3.50		3.00		4.50			3.00
Interest paid and accrued { On debentures	143,938	146			45,620		61,601	142,481	90,757	82,227
Interest paid and accrued { On deposits	25,390	266	63,129		1,736		7,237			356
Cost of management	43,372	11,582	17,005	100	18,742	7,331	8,790	45,482	29,543	18,382
Invested and secured by mortgage { In Ontario	4,218,926	155,641	829,741		1,049,547	6,000	699,247	2,521,251	2,701,382	935,317
Invested and secured by mortgage { Elsewhere	1,238,776	281,625			929,771	11,871		1,247,165		1,219,637
Average interest on total amount secured by mortgage	5.74	10	5.95		6.10	8.00	6.50	6.00	6.11	6.50
Average interest on amount loaned on mortgage in year	6.70	10	5.95		6.10		6.00	6.50	6.21	6.50
Mortgages on which compulsory proceedings have been taken { Number	83	5	1		13		10	49	32	17
Mortgages on which compulsory proceedings have been taken { Amount	165,353	3,646	400		47,130		8,377	94,211	51,860	49,602
Value of mortgaged property held for sale	345,727	1,610	36,850		130,000		17,000	371,655	112,850	333,777
Amount chargeable against such property	341,629	950	29,608		130,000		14,300	371,655	110,183	352,996

*Including $65,288 written off principal, and $68,949 transferred to real estate. *x* Stocks, bonds and debentures. † Trust funds on which account $697,844 was received and $520,578 paid out in the year. *y* Stocks *z* Mortgage bonds and trust investments. *s* $200,000 of which is to meet contingencies. ‡ Including certificates payable at fixed dates. *v* Paid in anticipation of calls. *p* Including $92,880 debenture stock. Including $638,998 debenture stock.
* Including $13,538 to balance liabilities. ‡‡ To complete loans in progress.

TABLE I. LOAN AND INVESTMENT COMPANIES.—*Continued.*

Schedule for Loan Companies.	North of Scotland, Toronto.	Ontario Industrial, Toronto.	Peoples' Loan, Toronto.	Provident Investment, Toronto.	Provincial Building, Toronto.	Real Estate Loan, Toronto.	Scottish Ontario and Manitoba, Toronto.	Sons of England Building, Toronto.	Sun Savings and Loan, Toronto.	Toronto General Trust, Toronto.
Capital Stock.	$	$	$	$	$	$	$	$	$	$
Capital authorized	3,650,000	500,000	600,000	2,500,000	5,000,000	1,600,000	2,433,333	1,000,000	5,000,000	1,000,000
Capital subscribed	3,650,000	466,800	600,000	550,000	1,258,500	578,840	1,216,667	30,600	402,300	1,000,000
Liabilities.										
Liabilities to stockholders :										
Stock fully paid up		61,900	600,000	550,000	9,250	322,440		2,200		
Stock on which has been paid	730,000	284,763			172,643	51,280	803,053	4,844	4,456	225,000
Accumulating stock	+ 11,052						§142,957			
Reserve fund	389,333	100,000	40,000		430	50,000	12,167			250,000
Dividends declared and unpaid	36,500					7,525	209			5,625
Contingent fund and unappropriated profits	9,228	7,082	33,813	10,422	10,519	17,659	16,325	414		56,712
Total	1,176,113	453,745	673,813	560,422	192,842	448,904	974,711	7,458	4,456	537,337
Liabilities to the public :										
Deposits		49,316	113,665		4,600	407	2,190			
Debentures payable in Canada			255,892			51,892				
Debentures payable elsewhere	‡ 2,920,000		52,073				180,788			
Interest on debentures due and accrued			4,197			388	1,079			
Interest on deposits due and accrued		1,210					10			
Owing to banks		7,603								22,797
Other liabilities	8,629	*202,320		8,536			12,188		507	*v* 5,157,727
Total	2,928,629	260,449	425,827	8,536	4,600	52,687	196,255		507	5,180,524
Assets.										
Secured loan assets :										
Real estate of—										
General borrowers	3,664,394	108,754	701,033		195,550	369,933	196,544	6,800	2,400	4,750,963
Directors and executive officers of company										
Held under power of sale	62,548		246,223			10,808				81,294
Shareholders' stock		9,677	12,716		1,166	135		425		
Directors and officers of company on their stock										
Otherwise secured	100	200	156							††392,881
Total	3,727,042	118,631	960,128		196,716	380,876	196,544	7,225	2,400	85,225,13

Property assets:										
Municipal and school section securities, cash value	136,400									
Office furniture and fixtures	3,264	590	550		660	100	217		200	882
Cash on hand	153	156	713	3,285	122		253			70
Cash in banks	105,188		1,451	785	4	37,435	39,496	228	93	227,430
Special deposit in banks									684	
Office premises	132,695									130,000
Real estate absolutely foreclosed						83,180	16,114			95,534
Real estate otherwise acquired		584,605	136,165	286,630			883,269			34,789
Other property		10,212	633	278,258			35,073	5	1,586	4,018
Total	377,700	595,563	139,512	568,958	726	120,715	974,422	233	2,563	492,723
Grand total *assets or liabilities*	4,104,742	714,194	1,099,640	568,958	197,442	501,591	1,170,966	7,458	4,963	5,717,861
Miscellaneous.										
Dividends declared in year { Rate per cent	10.			5.	6½.	4.		6.		10.
Dividends declared in year { Amount	73,000			24,063	11,876	14,949	nil.	386		22,500
Loaned during the year	332,210	11,786	98,312		124,274	15,844	8,897		2,400	837,544
Received from borrowers (principal and interest)	664,746	**36,093	192,084	8,192	26,606	72,485	73,446	521	115	872,445
Received from depositors		7,165	163,292		4,600					
Repaid depositors		28,053	220,397				487			
Debentures issued	†811,614		70,752			19,132				
Debentures repaid	†809,638		89,567			23,926	36,500			
Debentures to mature within one year			86,059			29,360	47,615			
Average rate of interest { For debentures	3.75		4.89			4.75	4.25			
Average rate of interest { For deposits		5.00	3.72				3.50			
Interest paid and accrued { On debentures	115,397		15,281			3,282	9,453			
Interest paid and accrued { On deposits		2,723	5,552				171			
Cost of management	44,308	3,648	6,026	1,201	6,047	5,245	2,855	69	2,509	42,626
Invested and secured by mortgage. { In Ontario	1,960,380	108,754	942,844		97,450	74,920	72,364	6,800	2,400	4,832,257
Invested and secured by mortgage. { Elsewhere	1,766,562		4,412		98,100	305,821	124,180			
Average interest on total amount secured by mortgage	6.70	6.50	4.87			6.55	6.50	6.50	9.00	5.71
Average interest on amount loaned on mortgage in year	6.70	6.50	5.70		10.80	6.50	6.00	6.50	9.00	5.44
Mortgages on which compulsory proceedings have been taken { Number	51		14				1			52
Mortgages on which compulsory proceedings have been taken { Amount	99,904		29,900				1,162			186,607
Value of mortgaged property held for sale	62,548		232,150			10,808				81,294
Amount charged off against such property	62,548		246,223			10,808				81,294

*Including $196,234 in mortgages payable. †Debenture stock premium account. ††Loan company and other debentures. ‡Including deposit receipts and debenture stock. §Stocks, bonds, and debentures. ‖Including $2,074,100 for High Court of Justice, and $3,081,893 for trust accounts. ¶Paid in anticipation of calls.
** Including amount written off and transferred to real estate account. ‡‡Including instalments credited to stock.

TABLE I. LOAN AND INVESTMENT COMPANIES.—*Concluded.*

Schedule for loan companies.	Toronto Land and Loan, Toronto.	Toronto Land and Investment, Toronto.	Toronto Savings and Loan, Toronto.	Trust and Loan, Toronto.	Trusts Corporation of Ontario, Toronto.	Union Loan and Savings, Toronto.	Western Canada Loan, Toronto.	York County Loan, Toronto.	Ontario Permanent Building, Woodstock.	Oxford Permanent Loan, Woodstock.
Capital Stock.	$	$	$	$	$	$	$	$	$	$
Capital authorised	1,000,000	500,000	2,000,000	14,600,000	1,000,000	1,250,000	3,000,000	10,000,000	5,000,000	270,000
Capital subscribed	104,600	400,000	1,000,000	7,300,000	1,000,000	1,095,400	3,000,000	2,000,000	1,014,600	243,300
Liabilities.										
Liabilities to stockholders :										
Stock fully paid up	11,500	89,600	500,000			600,000	1,000,000	75,889	15,464	232,450
Stock on which has been paid	67,378	154,130	100,000	1,581,667	190,665	99,020	500,000			2,275
Accumulating stock								67,938	97,684	
Reserve fund			105,000	902,920		200,000	770,000	1,000		21,500
Dividends declared and unpaid	5		18,000			20,830	60,000		1,207	7,094
Contingent fund and unappropriated profits	250	16,053	1,446	87,950	26,338	65,474	63,005	*23,904	**6,630	200
Total	79,133	259,783	724,446	2,572,537	217,003	985,324	2,393,005	168,781	120,985	263,519
Liabilities to the public :										
Deposits		1,610	272,223			268,314	914,138			170,029
Debentures payable in Canada		6,850	415,900			176,218	460,667			41,223
Debentures payable elsewhere		4,867	9,247	4,490,407		1,299,109	3,045,685			
Interest on debentures due and accrued		171	7,616				35,109			1,085
Interest on deposits due and accrued		45	5,564				15,000			6,298
Owing to banks	600					1,085			7,840	
Other liabilities	†63,234	†22,522		81,269	*y* 931,205		505	‡5,827	‡3,900	350
Total	63,834	36,065	710,550	4,571,676	931,205	1,744,726	4,471,104	‡5,827	11,740	218,985
Assets.										
Secured loan assets :										
Real estate of—										
General borrowers	10,150	99,887	16,759	5,745,773	723,239	1,898,908	6,058,381	146,900	128,400	432,173
Directors and executive officers of company							800			
Held under power of sale		3,697		157,017	8,800	310,978	439,882			16,953
Shareholders' stock		800				17,730	4,739	16,373	425	7,772
Directors and officers of company on their stock						1,500				
Otherwise secured	5,491		*z* 480,942	6,235	*x* 215,514		32,442	3,594		
Total	15,641	104,384	497,701	5,909,055	947,553	2,229,916	6,535,444	166,867	128,825	456,898

Property assets :											
Municipal and school section securities, cash value							73,000	2,200			
Office furniture and fixtures				642	23,137	1,270	3,293	3,270			176
Cash on hand			5,417	46		107	2,263	587			870
Cash in banks	66	27	53,065	28,050	177,518	35,147	133,031	3,884			16,549
Special deposit in banks				114,900		50,000				3,900	
Office premises			10,000	83,894		66,333	121,878				7,500
Real estate absolutely foreclosed				177,994		226,169	66,000				
Real estate otherwise acquired	72,583	187,647									
Other property	* 54,677	3,790	‡ 868,813	‡ 829,632		48,108					511
Total	127,326	191,464	937,295	1,235,158	200,655	500,134	328,665	7,741	3,900		25,606
Grand total *assets* or *liabilities*	142,967	295,848	1,434,996	7,144,213	1,148,208	2,730,050	6,864,109	174,608	132,725		482,504
Miscellaneous.											
Dividends declared in year { Rate per cent.			6.	6.	6.	6.	8.	12.	9.		6.
Dividends declared in year { Amount			36,000	94,900	7,916	41,656	122,392	10,760	1,207		14,083
Loaned during the year			233,865	388,802	613,544	241,388	903,519	123,361	91,125		79,282
Received from borrowers (principal and interest		32,968	254,785	832,527	353,850	294,650	1,171,304	27,009	13,259		65,556
Received from depositors			670,991			223,002	260,089				212,993
Repaid depositors		4,073	781,388			315,988	355,843				185,883
Debentures issued		8,000	27,300	263,817		452,023	351,969				13,000
Debentures repaid		14,000	44,975	512,219		311,699	261,639				1,050
Debentures to mature within one year			11,800	635,137		295,786	555,250				7,500
Average rate of interest { For debentures		5.00	4.91	3.94		4.00	4.00				4.50
Average rate of interest { For deposits		5.00	4.12			3.75	3.30				4.00
Interest paid and accrued { On debentures		282	21,656	214,702		58,281	142,376				1,739
Interest paid and accrued { On deposits		73	14,811			12,729	33,740				6,496
Cost of management		2,172	6,523	65,372	13,803	19,970	56,179	17,209	4,734		2,652
Invested and secured by mortgage. { In Ontario		103,584	16,759	2,288,965	732,039	2,210,686	3,917,456	145,900	128,400		449,126
Invested and secured by mortgage. { Elsewhere	10,150			3,613,855			2,580,807	1,000			
Average interest on total amount secured by mortgage.	6.00	6.25	5.90	6.39	5.50	6.50	7.00	9.00	10.80		6.25
Average interest on amount loaned on mortgage in year		6.25	6.00	5.90	5.50	6.00	6.84	9.00	10.80		6.00
Mortgages on which compulsory proceedings have been taken. { Number				163	2	21	51				2
Mortgages on which compulsory proceedings have been taken. { Amount				239,830	2,700	69,150	88,773				5,169
Value of mortgaged property held for sale		3,697		131,664	12,200	310,978	488,758				18,000
Amount chargeable against such property		3,697		157,047	8,800	310,978	439,882				16,953

* Including $54,293 in profit and loss account and defalcations. ‡ Stocks, bonds and debentures. *y* Estate investments and under order of Court. *x* Call loans on stocks. ‡ Shareholders. ‡ Consols, bonds and debentures. ** Including accumulated profits. * Including dividends credited $10,602 and borrowers' sinking fund $9,964. † Including mortgages payable. ‡ To complete loans in progress.

LOAN AND INVESTMENT COMPANIES.

TABLE II. Summary statement showing totals of all companies reporting for the nine years, 1887-95.

Schedule for Loan Companies.	1895.	1894.	1893.	1892.	1891.	1890.	1889.	1888.	1887.
Number of companies reported	90	89	86	76	71	67	71	64	55
Capital Stock.									
	$	$	$	$	$	$	$	$	$
Capital authorized	*239,596,938	233,916,938	225,586,938	187,402,249	164,837,249	102,782,249	99,824,249	96,246,249	79,575,583
Capital subscribed	†98,822,324	94,047,711	88,582,985	80,278,277	76,152,817	70,672,710	69,694,221	67,939,559	56,114,310
Liabilities.									
Liabilities to stockholders:									
Stock fully paid up	16,393,999	16,093,673	14,843,377	14,449,595	13,727,930	12,498,330	12,149,509	11,617,271	11,342,861
Stock on which has been paid	20,532,885	19,774,082	20,902,527	18,729,198	18,608,795	18,688,567	18,569,883	18,470,826	15,429,167
Accumulating stock	2,145,672	1,567,879	378,753	260,523	100,688	99,836	107,935	205,839	222,602
Reserve fund	10,612,086	10,741,666	10,679,718	10,300,489	9,866,475	9,288,795	8,711,107	8,030,118	7,254,105
Dividends declared and unpaid	838,614	943,688	1,005,540	960,827	940,995	952,907	985,602	955,644	885,736
Contingent fund and unappropriated profits.	1,662,587	1,461,933	1,475,909	1,193,110	1,134,514	1,145,117	1,105,951	828,463	776,092
Total	52,185,843	50,582,921	49,285,824	45,893,742	44,379,397	42,673,552	41,629,987	40,108,161	35,910,563
Liabilities to the public:									
Deposits	17,603,949	18,352,607	17,988,051	19,120,523	18,176,765	17,103,403	16,942,965	16,560,766	17,533,413
Debentures payable in Canada	10,680,309	9,789,799	9,449,278	8,598,440	7,910,676	7,654,504	7,622,256	6,578,122	5,500,622
Debentures payable elsewhere	50,333,205	51,014,502	50,691,596	43,940,267	41,023,249	38,435,990	36,712,825	34,857,050	26,722,070
Interest on debentures due and accrued	473,984	465,069	467,433	438,802	433,954	397,599	} 683,322	619,070	587,484
Interest on deposits due and accrued	278,848	300,842	321,797	301,922	283,310	296,847			
Owing to banks	264,735	641,830	181,328	143,389	91,480	269,094	214,046	131,903	155,326
Other liabilities	7,184,057	6,394,171	5,817,481	5,184,085	4,837,715	1,386,762	791,742	793,264	678,189
Total	86,819,087	86,958,820	84,916,664	77,727,428	72,757,149	65,544,199	62,967,156	59,540,175	51,177,104
Assets.									
Secured loan assets:									
Real estate of—									
General borrowers	109,856,184	110,243,398	109,196,475	101,976,599	97,780,207	92,001,824	} 91,536,309	85,578,993	74,954,076
Held under power of sale	6,050,807	5,314,629	4,488,298	3,609,708	3,381,150	3,006,109			
Directors and executive officers of company.	128,964	134,783	176,627	176,476	94,158	182,724	207,965	169,777	252,957

Shareholders' stock	679,078	619,550	590,202	553,604	521,659	609,797	602,587	708,137	852,267
Directors and officers of company on their stock	90,823	116,877	93,166	111,342	158,507	147,110	149,375	126,482	177,165
Otherwise secured	3,973,598	3,800,581	3,496,147	2,823,350	2,429,344	2,163,468	2,170,651	2,458,801	2,799,039
Total	120,779,454	120,229,818	118,040,915	109,251,079	104,365,025	98,111,032	94,666,887	89,042,190	79,035,804
Property assets:									
Municipal and school section securities	2,113,755	2,561,612	1,630,285	1,142,979	1,072,558	892,101	936,271	1,159,113	1,153,165
Office furniture and fixtures	78,562	75,234	47,140	30,472	24,690	24,424	27,182	30,385	27,372
Cash on hand	102,884	91,302	84,649	93,522	109,684	101,785	101,376	63,768	74,053
Cash in banks	3,250,111	3,397,704	2,612,808	2,528,627	2,637,761	2,092,822	2,501,983	2,316,875	2,127,308
Special deposit in banks	779,815	753,127	802,374	1,252,109	1,344,965	640,697			
Office premises	1,828,705	1,777,301	1,638,742	1,480,031	1,270,095	1,048,296	1,001,508	869,650	751,971
Real estate absolutely foreclosed	1,641,150	1,194,714	793,417	708,199	760,200	909,612	1,095,197		
Real estate otherwise acquired	3,669,840	3,984,979	3,501,584	3,105,721	3,465,404	2,589,190	2,283,817	6,166,355	3,917,994
Other property	4,760,654	3,475,950	5,050,574	4,028,431	2,086,226	1,926,792	1,982,922		
Total	18,225,476	17,311,923	16,161,573	14,370,091	12,771,521	10,105,719	9,930,256	10,606,146	8,051,863
Grand total *assets* or *liabilities*	139,004,930	137,541,741	134,202,488	123,621,170	117,136,546	108,217,751	104,597,143	99,648,336	87,087,667
Miscellaneous.									
Dividends declared in year	2,471,783	2,478,215	2,474,219	2,356,348	2,309,701	2,250,027	2,202,217	2,152,377	2,021,207
Loaned during the year	19,102,721	19,571,518	21,962,225	23,403,642	19,124,870	18,542,009	21,795,945	18,567,954	17,162,412
Received from borrowers (principal and interest)	25,108,469	23,340,559	26,134,151	24,350,993	22,096,610	20,163,955	21,353,871	20,393,404	18,987,927
Received from depositors	21,201,479	22,107,804	22,396,315	24,321,138	23,968,569	23,347,971	24,734,347	23,001,584	25,283,071
Repaid depositors	21,925,293	21,992,705	23,861,972	23,299,876	23,224,599	23,116,074	24,583,550	24,261,630	25,283,441
Debentures issued	10,180,261	10,819,519	8,970,783	10,372,155	9,400,632	10,564,009	11,337,938	8,736,777	6,763,884
Debentures repaid	10,123,733	10,477,463	7,582,286	6,798,854	6,785,889	8,523,124	7,578,661	5,944,268	4,376,294
Debentures to mature within one year	10,241,770	11,522,330	11,780,399	9,722,875	8,236,001	7,856,937	10,230,949	10,527,983	5,777,979
Interest paid and accrued { On debentures	2,675,494	2,667,571	2,681,983	2,273,183	2,147,903	2,035,921	2,015,084	1,906,741	1,552,621
Interest paid and accrued { On deposits	673,360	771,268	790,720	794,784	745,903	710,285	680,570	710,636	685,138
Cost of management	1,106,225	1,036,364	988,056	920,383	877,141	846,950	843,390	838,906	685,905
Invested and secured by mortgage { In Ontario	89,533,235	115,692,809	113,937,685	105,849,375	101,373,476	95,245,657	91,574,215	86,728,523	75,494,963
Invested and secured by mortgage { Elsewhere	26,502,720								
Mortgages on which compulsory proceedings have been taken { Number	1,197	1,061	1,037	884	892	805	767	820	688
Mortgages on which compulsory proceedings have been taken { Amount	2,536,890	2,792,189	2,283,520	2,161,496	2,081,354	1,899,209	1,850,647	1,834,890	1,419,012
Value of mortgaged property held for sale	6,361,493	5,424,902	4,596,590	3,748,669	3,564,646	3,199,209	3,026,619	3,196,160	2,491,788
Amount chargeable against such property	6,050,807	5,314,629	4,488,298	3,609,708	3,451,812	3,006,109	2,860,594	2,969,480	2,190,465

*For limited companies only. †Including $4,525,100 subscribed in eight unlimited companies.

LOAN AND INVESTMENT COMPANIES.

TABLE III. Comparative statement showing the amount loaned in each of the five years 1891-95, with a yearly average for the nine years 1887-95, by Companies that have reported for the full period.

Companies.	1895.	1894.	1893.	1892.	1891.	Average 1887-1895.
	$	$	$	$	$	$
TORONTO:						
Bristol and West of England	3,085	38,567	107,363	110,674	114,406	148,216
Building and Loan	68,050	95,100	228,350	173,000	153,826	209,801
Canada Landed Credit and National Investment	232,878	337,197	463,104	564,863	681,800	487,068
Canada Permanent Loan	1,494,569	1,187,413	1,922,279	2,037.994	1,612,056	1,798,280
Farmers' Loan	72,926	196,445	232,029	374,527	309,709	299,335
Freehold Loan	617,097	880,266	1,325,593	1,017,265	866,559	1,044,523
Home Savings	2,823,146	2,554,393	2,254,091	2,231,208	1,935,977	1,939,978
Imperial Loan	83,131	48,938	272,984	629,006	526,498	388,490
Land Security	99,559	136,882	707,638	522,302	238,483	382,941
London and Canadian Loan	395,407	422,582	575,726	662,348	495,126	574,210
North of Scotland Mortgage	332,210	490,078	519,138	475,187	476,000	506.574
Ontario Industrial Loan	11,786	14,263	22,225	22,338	36,142	58,409
People's Loan	98,312	115,946	170,328	208,641	145,446	187,600
Real Estate Loan	15,844	98,791	87,450	121,043	75,800	74,506
Toronto Land and Loan	.....	.....	.....	1,340	3,022	15,106
Trust and Loan	388,802	560,070	581,202	690,864	809,438	716,363
Union Loan	241,388	85,791	332,272	396,360	449,661	397,104
Western Canada Loan	903,519	1,147,895	1,096,616	1,135,999	900,052	1,102,552
LONDON:						
Agricultural Savings	245,502	258,830	227,716	362,482	179,060	247,698
Canadian Savings	160,517	114,900	176,636	212,802	248,478	203,569
Dominion Savings	357,910	317,513	322,288	720,222	847,696	550,670
Huron and Erie Loan	779,775	943,560	1,013,895	1,022,274	706,605	824,178
London Loan	208,109	312,245	235,323	1,026,789	{ 506,713	} 386,494
Royal Standard Loan					{ 86,940	}
Ontario Loan	506,114	464,302	750,097	702,284	645,023	594,777
ST. THOMAS:						
Elgin Loan	94,348	38,131	129,645	42,954	37,400	64,919
Southern Loan	182,208	152,688	221,091	133,768	93,859	122,903
South-western Farmers' Loan	136,700	76,640	84,305	83,186	35,337	63,750
Star Loan	76,770	39,604	69,295	83,916	54,967	60,737
HAMILTON:						
Hamilton Provident and Loan	556,685	433,113	497,258	740,239	747,150	643,056
Hamilton Homestead Loan	10,134	18,435	22,409	19,294	17,364	17,087
Landed Banking and Loan	294,539	200,010	305,208	390,296	385,308	318,974
KINGSTON:						
Frontenac Loan	38,467	77,843	78,743	117,874	147,916	78,867
Ontario Building	43,912	70,731	84,596	85,317	90 639	82,730
SARNIA:						
Huron and Lambton Loan	99,929	117,965	106,954	117,638	80,352	116,403
Lambton Loan	127,183	132,583	177,999	208,541	133,649	186,236
Other places:						
Hastings Loan ..... Belleville	32,037	81,674	58,325	38,254	96,396	57,413
Royal Loan ..... Brantford	146,980	144,018	126,619	288,399	155,242	181,656
Chatham Loan ..... Chatham	81,248	61,246	77,343	117,820	90,957	77,087
Huron and Bruce ..... Goderich	23,469	30,060	24,080	33,074	29,143	34,130
Guelph and Ontario ... Guelph	246,769	150,483	245,641	269,422	356,906	273,204
Orangeville Building... Orangeville	3,775	2,650	2,933	2,700	4,867	2,954
Ontario Loan ..... Oshawa	49,591	75,243	80,871	90,350	71,147	85,691
Metropolitan Loan..... Ottawa	35,728	44,324	84,021	50,182	39,363	49,248
Central Canada ..... Peterborough.	789,331	1,226,924	771,849	676,409	500,840	824,645
Crown Savings ..... Petrolea	31,773	27,189	49,214	40,664	29,753	35,556
Midland Loan..... Port Hope	133,424	111,407	223,419	221,724	223,738	180,242
Security Loan ..... St. Catharin's	136,816	81,996	122,618	153,503	115,396	135.723
British Mortgage..... Stratford	271,452	170,690	172,459	297,720	186,127	206,890
Oxford Perman'nt Loan. Woodstock	79,282	58,602	118,129	34,585	19,874	52,553
Total	13,862,186	14,446,616	17,559,367	19,759,650	16,794,206	17,091,006

PART V.

CHATTEL MORTGAGES.

The returns relative to chattel mortgages are made, in accordance with the Statutes to the Minister of Agriculture. The tabulation of these has been entrusted to this Bureau. The following statement gives the number of chattel mortgages on record and undischarged for the Province of Ontario for the year ending December 31, 1895, and the six preceding years:

Year ending Dec. 31.	To secure existing debt on present advance.		To secure future indorsation on advance.		Total.	
	No.	Amount.	No.	Amount.	No.	Amount.
		$		$		$
1895	22,018	10,555,922	373	456,398	22,391	11,012,320
1894	21,276	10,603,393	483	616,812	21,759	11,220,205
1893	19,342	8,973,118	380	360,267	19,722	9,333,385
1892	18,927	9,215,753	455	829,724	19,382	10,045,477
1891	18,902	8,595,417	516	908,971	19,418	9,504,388
1890	17,271	8,121,316	632	857,542	17,903	8,978,858
1889	15,629	6,973,837	585	518,071	16,214	7,491,908

The following statement gives the numbers and amount of chattel mortgages for the different districts of the Province for 1895 and previous three years:

Districts.	1895.		1894.		1893.		1892.	
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
		$		$		$		$
Lake Erie	2,934	1,066,587	2,781	1,186,213	2,679	1,010,557	2,922	1,132,113
Lake Huron	2,247	760,168	2,288	728,750	1,953	664,621	1,847	630,015
Georgian Bay	2,236	856,963	2,271	862,708	2,080	778,813	2,120	936,409
West Midland	3,209	1,582,895	2,999	1,347,939	2,784	1,183,616	2,685	1,171,407
Lake Ontario	5,724	3,320,257	5,692	3,544,379	4,957	2,953,316	4,604	2,950,259
St. Lawrence & Ottawa	3,302	1,578,788	3,049	1,456,741	2,880	1,361,047	2,847	1,505,524
East Midland	1,714	768,675	1,749	756,766	1,516	593,646	1,526	607,160
Northern Districts	1,025	1,077,987	930	1,336,709	873	787,769	831	1,112,590
The Province	22,391	11,012,320	21,759	11,220,205	19,722	9,333,385	19,382	10,045,477

More than one-half the number of the chattel mortgages are registered against farmers. The following statement gives the numbers and amounts of chattel mortgages on record against farmers on December 31, of each of the years 1892, 1893, 1894 and 1895:

Districts.	1895.		1894.		1893.		1892.	
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
		$		$		$		$
Lake Erie	1,980	476,720	1,783	440,912	1,709	424,242	1,898	438,430
Lake Huron	1,516	401,273	1,514	394,445	1,299	334,670	1,208	322,432
Georgian Bay	1,713	474,511	1,650	444,992	1,556	392,590	1,603	456,699
West Midland	1,656	671,827	1,480	570,303	1,380	478,518	1,376	468,034
Lake Ontario	1,983	822,978	2,005	724,556	1,752	647,269	1,743	662,189
St. Lawrence & Ottawa	1,679	457,929	1,513	390,036	1,422	374,087	1,426	371,659
East Midland	1,206	364,639	1,259	394,644	1,098	324,672	1,040	320,573
Northern Districts	555	97,719	483	86,996	468	83,800	480	77,961
The Province	12,288	3,767,596	11,687	3,446,884	10,684	3,059,857	10,774	3,117,977

CHATTEL MORTGAGES—BY COUNTY DIVISIONS.

TABLE I. Showing by County Municipalities of Ontario the total number and amount of Chattel Mortgages and Renewals on record and undischarged on January 1st, and December 31st, 1895.

Counties or Districts.	Chattel mortgages on record January 1st, 1895.				Chattel mortgages on record December 31st, 1895.			
	To secure existing debt.		For future indorsation.		To secure existing debt.		For future indorsation.	
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
		$		$		$		$
Algoma	176	613,891	2	70,000	164	477,721	2	2
Brant	476	251,575	2	1,100	480	243,406	....	....
Bruce	1,085	315,635	9	9,995	1,111	336,669	7	6,052
Carleton	711	607,431	14	15,881	750	565,106	19	6,602
Dufferin	332	96,016	....	....	400	138,344	2	540
Elgin	521	196,274	3	40,200	500	163,265	....	....
Essex	365	146,731	35	68,214	542	213,431	12	86,445
Frontenac	517	201,195	....	....	529	230,032	....	....
Grey	1,266	353,078	2	3,000	1,236	335,972	....	....
Haldimand	194	49,927	....	....	206	55,783	....	....
Haliburton	73	12,704	....	....	60	15,659	....	....
Halton	132	89,173	....	....	140	76,044	1	1,000
Hastings	880	261,247	36	14,901	829	237,213	36	12,913
Huron	486	201,020	36	12,769	560	232,818	13	2,607
Kent	1,084	421,471	7	16,955	1,146	310,482	6	71,796
Lambton	550	148,229	122	41,102	472	130,587	84	51,435
Lanark	216	87,243	9	1,268	253	98,511	6	1,822
Leeds and Grenville	446	127,421	18	8,615	434	135,965	31	28,187
Lennox and Addington	242	77,581	5	1,430	282	88,870	5	881
Lincoln	299	185,698	11	12,582	306	161,832	7	9,870
Manitoulin	85	51,808	1	6,000	81	60,241	....	....
Middlesex	850	349,462	1	5,000	926	376,486	1	4,000
Muskoka	250	76,146	3	83,700	271	130,282	2	1,411
Nipissing	109	55,611	3	1,430	175	118,014	2	572
Norfolk	330	82,606	....	....	309	79,166	....	....
Northumberland and Durham	809	356,548	1	375	773	316,952	....	....
Ontario	538	249,279	27	21,157	499	258,962	24	12,152
Oxford	329	171,655	18	6,477	381	194,689	25	17,529
Parry Sound	185	248,255	2	51,426	201	185,814	5	23,552
Peel	203	117,467	12	3,621	243	102,916	1	580
Perth	255	115,837	7	2,757	258	116,359	2	868
Peterborough	337	255,209	15	5,618	373	297,110	7	10,154
Prescott and Russell	218	109,351	....	....	269	92,564	....	....
Prince Edward	291	75,592	5	3,019	268	94,585	6	1,602
Rainy River	50	34,625	....	....	61	42,684	1	750
Renfrew	239	74,893	2	175	283	120,313	7	6,875
Simcoe	1,003	506,630	....	....	1,000	520,991	....	....
Stormont, Dundas and Glengarry	390	135,138	22	9,019	414	194,525	20	8,535
Thunder Bay	61	42,168	3	1,649	58	36,769	2	175
Victoria	405	204,272	3	2,815	412	183,726	3	11,900
Waterloo	233	138,980	6	13,254	250	259,498	2	2,657
Welland	238	142,024	4	21,811	211	61,120	2	23,099
Wellington	484	193,697	6	2,129	478	226,967	4	1,552
Wentworth	665	618,265	10	3,291	644	523,521	8	8,030
York	2,668	1,754,335	21	53,977	2,780	1,713,958	24	38,253
Total	21,276	10,603,393	483	616,812	22,018	10,555,922	373	456,398

CHATTEL MORTGAGES—FARMERS.

TABLE II. Showing by County Municipalities of Ontario the number and amount of Chattel Mortgages and Renewals registered against Farmers, on record and undischarged on January 1st, and December 31st, 1895.

Counties and Districts.	Chattel mortgages on record January 1st, 1895.				Chattel mortgages on record December 31st, 1895.			
	To secure existing debts.		For future indorsation.		To secure existing debt.		For future indorsation.	
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
		$		$		$		$
Algoma	86	16,373	....	.....	97	17,335	....	.....
Brant	232	95,287	....	.....	223	104,201	....	.....
Bruce	767	181,992	2	995	763	183,918	3	3,000
Carleton	114	31,515	....	.....	130	40,109	4	1,223
Dufferin	256	72,039	....	.....	326	85,698	1	140
Elgin	278	79,449	....	.....	274	77,600	....	.....
Essex	228	61,893	19	3,921	352	101,664	5	2,524
Frontenac	245	62,389	....	.....	275	72,287	....	.....
Grey	1,012	233,402	....	.....	989	210,851	....	.....
Haldimand	137	30,004	....	.....	162	35,466	....	.....
Haliburton	63	6,673	....	.....	53	6,002	....	.....
Halton	79	37,847	....	.....	82	51,893	....	.....
Hastings	677	184,650	29	6,531	633	161,933	15	4,223
Huron	304	119,794	13	2,387	351	128,560	5	939
Kent	811	201,469	....	.....	878	198,157	....	.....
Lambton	341	70,505	87	18,772	336	70,905	58	16,951
Lanark	115	38,365	5	598	147	47,266	3	222
Leeds and Grenville	276	56,757	10	1,489	279	57,879	23	9,820
Lennox and Addington	156	51,516	....	.....	176	61,397	4	606
Lincoln	122	48,115	4	744	115	48,326	5	734
Manitoulin	30	11,512	1	6,000	57	19,474	....	.....
Middlesex	855	128,788	....	.....	402	170,053	....	.....
Muskoka	171	25,284	....	.....	183	24,162	....	.....
Nipissing	53	6,735	....	.....	71	10,522	....	.....
Norfolk	197	35,024	....	.....	229	44,847	....	.....
Northumberland and Durham	565	208,153	....	.....	557	212,358	....	.....
Ontario	355	135,688	18	11,793	345	177,491	12	6,315
Oxford	153	65,974	11	3,427	190	71,009	16	4,789
Parry Sound	96	15,540	....	.....	126	16,903	....	.....
Peel	147	61,225	6	1,990	153	63,271	....	.....
Perth	137	61,610	5	1,417	129	57,602	....	.....
Peterborough	189	83,456	3	475	187	79,066	....	.....
Prescott and Russell	160	39,401	....	.....	190	51,683	....	.....
Prince Edward	232	65,702	3	1,019	227	67,405	6	1,602
Rainy River	4	1,425	....	.....	6	2,360	....	.....
Renfrew	170	45,319	1	60	185	50,876	....	.....
Simcoe	628	211,590	....	.....	724	263,060	....	.....
Stormont, Dundas and Glengarry	248	59,051	13	3,576	257	62,384	6	1,977
Thunder Bay	12	4,127	....	.....	15	6,963	....	.....
Victoria	296	112,049	2	815	318	113,415	....	.....
Waterloo	66	44,916	1	254	78	53,702	....	.....
Welland	113	29,152	....	.....	82	16,462	....	.....
Wellington	260	95,247	4	1,344	284	124,306	1	150
Wentworth	154	49,965	3	1,198	139	50,817	2	1,043
York	320	106,117	....	.....	340	141,723	....	.....
Total	11,447	3,378,079	240	68,805	12,121	3,711,338	167	76,258

ANNUAL REPORT

OF THE

BUREAU OF INDUSTRIES

FOR THE

PROVINCE OF ONTARIO

1895

PART VI.—MUNICIPAL STATISTICS.

PUBLISHED BY THE ONTARIO DEPARTMENT OF AGRICULTURE

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1896

FOURTEENTH ANNUAL REPORT

OF THE

ONTARIO BUREAU OF INDUSTRIES.

PART VI.

1895.

To the Honorable the Minister of Agriculture:

SIR,—I have the honor to present herewith Part VI. of the fourteenth annual report of the Bureau of Industries for 1895, containing tabulated statements of statistics of the municipalities of Ontario up to December 31, 1895.

The statistics of assessment, rate of taxation and population are compiled from returns made by municipal clerks, while the financial statements for 1894 are tabulated from schedules furnished by municipal treasurers, after being checked over with the detailed reports of the municipal auditors. A large amount of correspondence was rendered necessary in order to rectify discrepancies.

I am obliged to report that the following officers had failed to forward returns in time for tabulation: *treasurers* of the village of Port Colborne, and of the towns of Mattawa and North Bay. I had occasion to report the delinquency of the treasurers of Mattawa and North Bay last year. In these cases estimates have been made or statistics have been compiled from auditors' returns or other documents.

In the case of a few municipalities no reports were received from the auditors, and in some other cases the reports received were incomplete and of but little use, so that we have been compelled, in these cases, to accept the schedules as compiled by the treasurers and amended by correspondence.

I have the honor to be, sir,

Your obedient servant,

C. C. JAMES,

Secretary.

TORONTO,

October, 1896.

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PART VI.

MUNICIPAL STATISTICS.

The following statement is compiled from the summarized tables iv., vi. and xix., and gives population, total assessment, amount of taxes imposed for 1895, the amount of bonded and floating debt, together with the amount paid each year by all the municipalities of the Province for interest for the nine years 1886-94:

Year.	Population.	Total assessment.	Taxes imposed for all purposes.			Bonded debt.		Floating debt.	Interest paid on loans and debentures.
			Total.	Rate per head.	Mills on the dollar.	Total.	Rate per head.		
		$	$	$ c.		$	$ c.	$	$
1895	1,957,390	$21,466,166	12,316,429	6 29	14.99	*	*	*	*
1894	1,936,219	826,179,370	12,320,312	6 36	14.91	49,724,587	25.68	6,669,567	2,552,607
1893	1,910,059	825,530,052	12,512,660	6 56	15 17	48,083,243	25.17	6,796,422	2,508,621
1892	1,909,527	825,211,127	11,804,570	6 18	14.30	47,166,962	24.70	6,469,899	2,482,156
1891	1,922,121	818,847,394	11,767,748	6 12	14 37	43,888,853	22.83	7,629,780	2,498,294
1890	1,917,544	793,616,271	10,897,485	5 68	13.65	40,720,985	21.24	8,387,186	2 240,692
1889	1,906,901	761,995,816	10,248,198	5 37	13 45	38,988,332	20.44	6,493,519	2,057,938
1888	1,880,145	748,654,570	9,919,952	5 28	13.25	34,729,527	18.47	6,437,363	1,999,760
1887	1,848,457	717,311,938	9,300,113	5 03	12.97	31,943,320	17.28	5,645,208	1,820,590
1886	1,828,495	694,380,959	9,009,385	4 93	12.97	29,924,863	16.37	4,841,717	1,715,620

* Statistics for 1895 are not yet complete.

The population shows a small increase but the upward flight of assessments and taxation has been checked. There is no abatement to the increase of debenture debt, there being a net addition in 1894 of $1,641,344. This brings the municipal bonded debt up to $49,724,587, or an average of $25.68 per head of population, as compared with $16.37 in 1886. The interest paid on this debt and on temporary loans amounted in 1894 to $2,552,607. Of the above outstanding debenture debt $4,805,897 is on account of railways and $3,990,317 for school purposes. The amount of floating liabilities of the municipalities was $6,669,567, of which $3,151,628 was for temporary loans.

The following table shows the growth of population by municipalities for ten years:

Year.	Townships.	Towns.	Villages.	Cities.	Total.
1895	1,109,631	295,523	136,021	416,215	1,957,390
1894	1,103,828	292,094	131,487	408,810	1,936,219
1893	1,096,984	287,423	127,987	397,665	1,910,059
1892	1,102,467	286,769	126,637	393,664	1,909,527
1891	1,116,347	284,111	126,434	395,229	1,922,121
1890	1,118,252	410,530		388,762	1,917,544
1889	1,130,060	400,890		375,951	1,906,901
1888	1,133,046	393,161		353,938	1,880,145
1887	1,140,138	377,389		330,930	1,848,457
1886	1,148,856	360,005		319,634	1,828,495

Following is a comparative table for ten years for total assessed values.

Year.	Townships.	Towns.	Villages.	Cities.	Total.
	$	$	$	$	$
1895	448,417,259	92,839,570	30,518,275	249,691,062	821,466,166
1894	451,476,103	92,237,150	29,836,243	252,629,874	826,179,370
1893	451,629,103	93,386,224	29,290,446	251,224,279	825,530,052
1892	452,065,658	93,037,934	28,873,437	251,234,098	825,211,127
1891	454,070,364	91,866,360	28,509,448	244,401,222	818,847,394
1890	452,467,088	115,402,233		230,746,950	798,616,271
1889	450,977,220	106,453,798		204,474,798	761,905,816
1888	460,615,822	100,413,029		187,625,719	748,654,570
1887	456,170,163	93,337,596		167,804,179	717,311,938
1886	452,097,645	88,078,093		154,204,921	694,380,659

The amount of taxes imposed in townships, towns, villages and cities is shown in the following, for ten years:

Year.	Townships.	Towns.	Villages.	Cities.	Total.
	$	$	$	$	$
1895	4,473,269	2,000,429	565,137	5,277,594	12,316,429
1894	4,579,044	1,934,437	548,356	5,258,475	12,320,312
1893	4,629,028	1,922,325	527,127	5,444,180	12,522,660
1892	4,599,442	1,854,741	521,254	4,828,133	11,803,570
1891	4,544,291	1,793,346	511,679	4,918,432	11,767,748
1890	4,473,108	2,161,644		4,262,733	10,897,485
1889	4,507,717	1,993,623		3,746,858	10,248,198
1888	4,494,780	1,884,918		3,540,264	9,919,962
1887	4,431,720	1,759,248		3,109,145	9,300,113
1886	4,388,401	1,670,848		2,950,136	9,009,385

The next table compares the debenture debt outstanding in the various municipalities on December 31st, for each of nine years:

Year.	Townships.	Towns.	Villages.	Cities.	Counties.	Total.
	$	$	$	$	$	$
1894	2,942,267	8,586,442	1,157,552	34,778,154	2,260,172	49,724,587
1893	3,039,823	8,195,283	1,109,482	33,399,063	2,339,592	48,083,243
1892	3,089,430	7,463,104	1,116,242	32,966,371	2,531,815	47,166,962
1891	3,118,639	6,744,171	1,025,489	30,253,043	2,747,511	43,888,853
1890	3,366,617	7,099,648		27,110,712	3,144,008	40,720,985
1889	3,299,557	6,371,763		26,096,152	3,220,860	38,988,332
1888	3,409,744	6,146,561		21,769,261	3,403,961	34,729,527
1887	3,154,428	5,261,078		20,080,923	3,446,891	31,943,320
1886	3,153,646	4,795,580		18,469,893	3,505,744	29,924,863

The statistics in the above tables are for the municipalities as constituted in 1895, as follows: Townships, 492; towns, 96; villages, 137; cities, 13; and counties, 38. For example, Chatham became a city in 1895, so that Chatham has been transferred from towns to cities in all the years.

STATISTICS OF

ONTARIO MUNICIPALITIES.

ASSESSMENT AND TAXATION.

TABLE I. Detailed statement by Local Municipalities (townships, towns and villages) in the Counties of Ontario for 1895, of the number of Ratepayers, the Area, the Assessed Values and amount of Taxes imposed, as shown by the assessment and collection rolls, together with the average rate of taxes per head of population; also, a comparative summary of the totals for the two years 1894-95.

Municipalities.	No. of ratepayers.	No. of acres assessed.	Assessed values.				Taxes imposed for all purposes.	
			Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.
			$	$	$	$	$	$ c.
ESSEX:								
Anderdon	642	23,034	657,875	.....	.....	657,875	10,169	5 24
Colchester, N	434	30,461	572,840	.....	.....	572,840	17,162	11 95
Colchester, S	673	34,258	964,530	3,675	800	969,005	21,048	8 98
Gosfield, N	595	27,858	661,040	300	.....	661,340	12,175	7 65
Gosfield, S	656	29,965	966,525	18,325	5,000	989,850	13,329	6 63
Maidstone	774	44,310	794,301	1,550	.....	795,851	15,627	5 43
Malden	339	20,910	718,000	1,000	.....	719,000	8,055	5 27
Mersea	1,018	62,017	1,755,326	6,090	.....	1,761,416	22,839	6 00
Pelee Island	216	9,980	283,705	.....	.....	283,705	6,391	9 79
Rochester	497	32,413	626,300	1,950	.....	628,250	13,785	5 70
Sandwich, E	530	19,033	581,130	2,450	.....	583,580	10,675	4 15
Sandwich, S	471	23,568	557,149	1,900	.....	559,049	10,497	6 64
Sandwich, W	537	23,830	679,377	.....	.....	679,377	10,875	4 59
Tilbury, N	611	26,659	705,342	1,100	.....	706,442	10,938	4 83
Tilbury, W	604	22,607	633,035	.....	.....	633,035	12,822	7 38
Total rural 1895	8,597	430,903	11,156,475	38,340	5,800	11,200,615	196,387	6 31
Total rural 1894	9,274	429,706	11,242,035	36,050	8,300	11,286,385	195,504	6 28
Amherstburg	957	417	446,950	27,200	7,000	481,150	13,939	6 39
Essex	794	700	365,625	13,750	5,700	385,075	11,938	5 50
Leamington	512	700	341,748	31,815	10,050	383,613	9,264	4 98
Sandwich	495	2,000	419,747	12,250	1,190	433,187	6,890	5 32
**Walkerville*	314	450	842,206	988,313	53,960	1,884,479	22,902	19 93
Belle River	184	304	54,176	1,200	.....	55,376	1,427	2 62
Kingsville	429	452	392,041	14,950	4,316	411,307	9,455	7 34
Total urban 1895	3,685	5,023	2,862,493	1,089,478	82,216	4,034,187	75,815	7 23
Total urban 1894	3,803	5,224	2,832,347	1,112,399	19,790	3,964,536	71,900	6 94
KENT:								
Camden	896	40,647	1,014,050	2,100	.....	1,016,150	15,898	5 91
Chatham	1,721	84,231	1,979,683	2,000	900	1,982,583	43,140	8 97
Dover	923	68,037	1,644,661	1,400	.....	1,646,061	25,660	7 15
Harwich	1,829	86,85[illegible]	3,778,506	4,400	.....	3,782,906	38,790	8 78
Howard	1,204	58,720	2,523,840	.....	1,900	2,525,740	18,491	5 57
Oxford	971	49,910	1,431,880	4,300	400	1,436,580	15,797	5 79
Raleigh	1,438	71,197	2,445,086	1,400	100	2,446,586	30,456	6 77
Romney	480	26,272	742,073	4,000	.....	746,123	10,728	6 60
Tilbury, E	842	54,352	1,402,845	8,700	600	1,412,145	23,028	7 32
Zone	485	25,467	546,755	.....	215	546,970	7,364	6 02
Total rural 1895	10,789	565,685	17,509,379	28,350	4,115	17,541,844	229,352	7 16
Total rural 1894	10,629	563,989	17,615,667	26,350	1,300	17,643,317	249,434	7 78
Blenheim	575	488	384,760	35,010	7,910	427,680	8,786	5 15
Bothwell	238	2,250	172,587	22,250	400	195,237	3,638	4 26
Dresden	702	642	417,960	25,250	600	443,810	10,334	5 74
Ridgetown	572	662	590,650	49,915	3,575	644,140	13,708	6 32
Thamesville	313	381	166,600	21,100	5,975	193,675	4,708	5 52
Tilbury	305	577	172,285	5,800	300	178,485	5,775	5 95
+Wallaceburg	714	500	429,820	16,725	2,000	448,545	12,665	6 06
Total urban 1895	3,419	5,500	2,334,762	176,050	20,760	2,531,572	59,614	5 71
Total urban 1894	3,314	5,364	2,335,044	178,660	17,370	2,531,074	59,346	5 81

NOTE.—The towns are printed in italics. By the term "rural," we mean townships, and by "urban," towns and incorporated villages. * Separated from county for municipal purposes.

+ Becomes a town in 1896.

ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.	No. of rate-payers.	No. of acres assessed.	Assessed values.				Taxes imposed for all purposes.	
			Real property.	Personal property	Taxable income.	Total.	Total.	Per head.
			$	$	$	$	$	$ c.
ELGIN:								
Aldborough	1,648	75,385	1,613,465	9,250	850	1,623,565	22,973	4 80
Bayham	1,359	56,451	1,065,740	3,500	250	1,069,490	19,054	5 51
Dorchester, S	567	30,562	1,063,020	1,700	.....	1,064,720	9,884	6 77
Dunwich	1,221	69,293	1,724,245	2,600	.....	1,726,845	19,492	6 13
Malahide	1,420	64,273	1,894,005	17,250	2,080	1,913,335	19,472	5 34
Southwold	1,156	72,833	2,561,298	8,765	400	2,570,463	24,000	5 67
Yarmouth	2,012	69,739	2,673,524	4,150	5,200	2,682,874	27,012	5 62
Total rural (1895	9,383	436,536	12,595,297	47,215	8,780	12,651,292	141,887	5 55
Total rural (1894	9,121	436,558	12,634,233	48,785	11,830	12,694,848	151,659	6 03
Aylmer	853	531	619,373	94,325	18,166	731,864	16,604	7 69
Dutton	264	500	155,810	16,850	1,150	173,810	2,129	2 76
Port Stanley	265	519	128,835	15,520	1,200	145,555	2,274	3 45
Springfield	174	421	71,850	2,775	400	75,025	1,018	2 53
Vienna	113	1,000	70,650	3,305	950	74,905	1,693	4 39
Total urban (1895	1,669	2,962	1,046,518	132,775	21,866	1,201,159	23,718	5 42
Total urban (1894	1,673	2,958	1,035,648	153,970	21,716	1,211,334	24,728	5 60
NORFOLK:								
Charlotteville	1,276	59,566	923,660	23,050	3,100	949,810	11,237	3 30
Houghton	670	33,785	469,230	3,000	.....	472,230	5,918	3 02
Middleton	852	45,291	744,838	7,250	.....	752,088	8,889	3 51
Townsend	1,404	64,929	2,368,750	5,450	2,500	2,376,700	14,836	3 87
Walsingham, N	775	39,675	551,780	1,300	.....	553,080	7,592	3 38
Walsingham, S	726	51,534	669,337	6,555	250	676,142	9,864	5 42
Windham	1,349	66,719	1,619,494	11,750	400	1,631,644	12,520	3 14
Woodhouse	776	34,516	1,117,279	2,075	750	1,120,104	9,803	4 41
Total rural (1895	7,828	396,015	8,464,368	60,430	7,000	8,531,798	80,659	3 66
Total rural (1894	7,600	395,737	8,481,527	59,370	13,690	8,554,587	84,818	3 95
Simcoe	1,026	797	809,025	60,550	42,285	911,860	20,757	7 84
Delhi	272	500	136,858	10,175	.....	147,033	2,464	2 89
Port Dover	338	413	237,215	9,625	3,330	250,170	5,334	4 66
Port Rowan	214	100	107,760	10,750	400	118,910	2,521	3 96
Waterford	448	468	321,525	23,150	1,800	346,475	8,023	6 92
Total urban (1895	2,298	2,678	1,612,383	114,250	47,815	1,774,448	39,099	6 07
Total urban (1894	2,227	2,614	1,599,128	121,585	13,930	1,755,643	35,986	5 93
HALDIMAND:								
Canborough	343	21,418	352,180	.....	.....	352,180	3,238	3 54
Cayuga, N	681	32,776	742,035	4,000	.....	746,035	6,030	3 55
Cayuga, S	245	13,263	398,625	1,000	2,350	401,975	2,430	3 03
Dunn	227	14,774	415,198	16,940	.....	432,048	3,533	3 99
Moulton	675	27,000	611,000	.....	.....	611,000	6,203	3 44
Oneida	523	39,546	961,430	350	1,100	962,880	7,689	4 85
Rainham	516	25,656	500,265	2,700	.....	502,965	5,039	3 28
Seneca	732	41,747	896,690	1,700	.....	898,390	8,061	4 23
Sherbrooke	112	4,655	153,933	.....	.....	153,933	1,162	3 11
Walpole	1,330	66,675	1,927,185	12,250	400	1,939,835	17,838	4 20
Total rural (1895	5,274	280,510	7,018,811	38,940	3,850	7,061,641	61,789	3 88
Total rural (1894	5,172	280,132	7,044,647	40,160	3,250	7,093,057	64,627	4 07
Caledonia	391	547	150,920	13,050	4,050	177,020	3,932	4 10
Cayuga	246	1,003	156,360	7,400	4,000	168,760	3,470	3 13
Dunnville	*635	935	544,450	75,500	3,800	623,750	10,938	5 28
Hagersville	261	334	183,870	17,025	300	201,200	3,722	3 87
Total urban (1895	1,533	2,819	1,034,614	112,975	12,170	1,149,759	22,082	4 54
Total urban (1894	1,497	2,847	1,096,307	115,300	11,500	1,133,107	22,197	4 66

*These figures are from return of 1894

ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.	No. of rate-payers.	No. of acres assessed.	Assessed values.				Taxes imposed for all purposes.	
			Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.
			$	$	$	$	$	$ c.
WELLAND:								
Bertie	1,250	34,911	1,466,570	31,890	3,900	1,502,360	10,882	3 56
Crowland	446	19,189	404,593	6,925	400	411,918	4,748	4 84
Humberstone	875	30,839	835,285	20,750	2,575	858,610	8,750	3 32
Pelham	†773	28,822	932,035	21,925	400	954,360	8,079	3 35
Stamford	673	20,984	797,745	26,195	3,900	827,840	8,249	4 03
Thorold	843	22,708	640,905	30,275	1,700	672,880	7,498	3 88
Wainfleet	819	51,311	1,005,000	29,100	500	1,034,600	11,765	4 76
Willoughby	311	18,716	418,787	10,475		429,262	4,275	4 55
Total rural { 1895	5,990	227,480	6,500,920	177,535	13,375	6,691,830	64,246	3 90
Total rural { 1894	6,152	228,808	7,039,909	188,242	18,525	7,246,676	67,719	3 87
Niagara Falls	1,394	1,082	1,969,310	75,150	5,600	2,050,060	37,655	10 08
Thorold	760	780	571,727	32,600	4,050	608,377	16,568	7 38
Welland	672	700	516,629	66,060	14,500	627,189	14,280	7 40
*Bridgeburg	286	490	427,385	8,470		435,855	4,887	3 91
Chippawa	205	192	119,725	7,100	1 000	127,825	1,706	3 11
Fort Erie	753	678	304,668	6,025	13,000	323,693	3,549	4 17
Niagara Falls, South	401	299	265,859	9,850	10,100	275,809	6,302	4 81
Port Colborne	583	204	280,175	22,875	4,425	307,475	4,487	3 95
Total urban { 1895	4,455	4,425	4,475,478	228,130	52,675	4,756,283	89,434	6 88
Total urban { 1894	4,054	3,918	3,998 801	205,255	58,741	4,262,797	80,273	6 84
LAMBTON:								
Bosanquet	888	70 982	1,555,836	450		1,556,286	15,029	6 17
Brooke	1,067	74,023	1,996,050			1,996,050	25,742	7 87
Dawn	1,021	65,536	872,640	1,200		873,890	23,656	7 84
Enniskillen	1,723	81,347	1,438,100	7,800		1,445 900	30,091	5 79
Euphemia	†705	39,075	1,014,177	4,150		1,018,327	9,606	4 34
Moore	1,412	73,212	1,745,434	14,150	1,550	1,761,114	27,543	5 48
Plympton	1,126	75,015	2,068,150	2,100		2,070,250	21,469	6 42
Sarnia	741	38,530	742,825		400	743 225	17,642	8 23
Sombra	1,147	72,366	1,076,910	3,800		1,080,710	22,000	6 05
Warwick	1,089	69,976	2,037,150			2,037,150	15,559	4 51
Total rural { 1895	10,919	660,042	14,547,272	33,760	1,950	14,582,982	208,267	6 18
Total rural { 1894	10,985	661,136	14,833,684	43,530	2,450	14,879,664	219,782	6 38
Forest	568	950	311,305	20 125	3,500	334,930	8,903	5 33
Petrolea	1,821	2,700	1,071,900	53,100	65,650	1,191,15	34,264	7 89
Sarnia	1,761	1,450	1,818,110	152 672	107,435	2,078,217	54,957	8 74
Alvinston	391	441	188,965	18,625		207,590	3 797	3 60
Arkona	185	500	79,700	3.450		83,150	1,152	2 42
Oil Springs	365	1,883	226,105	19,000		245,105	4,896	4 89
Point Edward	329	718	200,220	1,845		202,065	3,658	2 60
Thedford	205	460	86 010	7,950		93,960	1,626	2 79
Watford	385	400	216,085	30,475	2,425	248,985	6,147	4 88
Wyoming	294	479	115,510	11,725	1,350	128,585	2,995	3 64
Total urban { 1895	6,274	9,981	4,313,910	319,467	180,360	4,813,737	121,795	6 48
Total urban { 1894	5,904	9,993	4,304,705	320,080	190,238	4,815,023	121,589	6 29
HURON:								
Ashfield	749	63,814	1,678,805	8,800		1,687,605	13,921	4 13
Colborne	685	33,857	1,169,705	4,800	400	1,174,905	8,782	4 59
Goderich	785	52,274	1,521,727			1,521,727	11,206	4 42
Grey	1,080	64,822	1,696,125	4,400		1,700,525	15,517	4 26
Hay	1,008	53,043	1,879 660	19,700	1,200	1,900,560	15,178	3 74
Howick	1,205	68,513	2,131,728	13,550	600	2,145,878	15,401	3 53
Hullett	939	53,473	2,145,460	4,450	900	2,150,810	12,743	4 40

*Incorporated in 1895. †These figures are from return of 1894.

ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.		No. of rate-payers.	No. of acres assessed.	Assessed values.				Taxes imposed for all purposes.	
				Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.
				$	$	$	$	$	$ c.
HURON.—*Con.*									
McKillop		803	51,972	1,830,110		1,400	1,831,510	16,959	3 67
Morris		697	54,620	1,758,481	3,400		1,761,881	11,885	4 17
Stanley		727	43,320	1,657,940	2,600		1,660,540	10,356	4 72
Stephen		1,181	56,736	1,793,493	10,400		1,803,893	18,340	4 79
Tuckersmith		636	40,838	1,934,330	5,760	1,200	1,941,230	10,654	4 07
Turnberry		645	35,608	1,052,435	2,800		1,055,235	7,356	3 12
Usborne		709	42,680	1,845,950	5,000	600	1,851,600	10,377	4 32
Wawanosh, E.		456	41,735	1,187,540	900		1,188,440	7,971	4 33
Wawanosh, W.		750	*41,683	1,128,050	8,900	500	1,137,450	8,294	3 88
Total rural	1895	13,661	798,838	26,411,550	99,450	6,800	26,513,789	188,587	4 11
	1894	12,670	799,824	26,430,683	112,000	8,000	26,550,683	188,360	4 12
Clinton		829	900	567,680	21,100	9,700	598,480	12,380	5 07
Goderich		1,100	1,000	970,685	53,625	35,170	1,059,480	25,180	6 81
Seaforth		593	550	551,248	74,375	8,400	634,023	15,317	6 35
Wingham		634	640	441,048	71,000	4,700	516,748	10,903	5 01
Bayfield		170	1,762	83,913	2,000	300	86,213	1,306	2 04
Blyth		256	451	184,415	19,950	1,050	205,415	3,746	3 80
Brussels		423	422	259,125	22,450	3,900	285,475	7,174	5 96
Exeter		604	1,032	443,290	44,850	3,250	491,390	6,964	3 97
Wroxeter		147	500	92,315	11,500	100	103,915	1,232	2 48
Total urban	1895	4,815	7,257	3,593,719	330,850	66,570	3,991,139	84,297	5 32
	1894	4,834	7,245	3,588,249	305,720	73,970	3,967,939	83,284	5 81
BRUCE:									
Albemarle		458	52,592	168,933	375		169,308	4,547	3 08
Amabel		890	64,000	634,900	8,700		643,600	12,175	4 25
Arran		862	54,138	1,476,010	1,250		1,477,260	12,072	4 70
Brant		1,189	69,579	2,020,600	11,900	1,050	2,033,550	14,264	3 36
Bruce		886	66,961	1,383,995	950		1,384,945	11,209	3 71
Carrick		1,238	59,411	2,046,840	19,700		2,066,540	12,000	2 55
Culross		586	56,567	1,709,840	5,300		1,715,140	8,385	2 70
Eastnor		336	49,769	176,100	150		176,250	4,182	2 72
Elderslie		877	54,225	1,301,610	1,800		1,303,410	11,560	4 70
Greenock		869	63,993	1,354,260	39,700		1,393,960	9,322	3 26
Huron		936	58,082	1,512,635	6,925	1,800	1,520,760	13,904	3 81
Kincardine		971	59,040	1,617,100	4,400	300	1,621,800	9,826	3 17
Kinloss		687	46,170	1,151,690	575	400	1,152,665	7,692	3 01
Lindsay and St. Edmunds		321	62,986	76,890	6,905		83,795	2,798	3 89
Saugeen		471	36,039	874,820	1,450		876,270	4,701	3 24
Total rural	1895	11,571	853,522	17,509,623	110,080	3,550	17,619,253	139,656	3 43
	1894	11,654	843,417	17,561,544	103,735	5,300	17,670,579	132,648	3 83
Kincardine		722	1,100	594,005	36,750	14,150	644,905	15,477	5 78
Wiarton		1,134	1,200	593,745	49,300	15,100	658,145	13,075	4 02
Wiarton		618	746	301,400	29,600	4,000	335,000	8,164	3 88
Chesley		402	500	302,425	33,725	7,900	344,050	6,501	3 79
Lucknow		396	500	240,971	49,475		290,046	6,182	4 47
Paisley		467	500	264,640	33,250		297,890	4,899	4 17
Port Elgin		470	600	273,210	31,375	1,950	306,485	6,194	4 32
Southampton		496	3,100	209,766	9,700		219,466	4,406	3 03
Tara		188	500	176,780	42,275	2,500	221,555	3,102	4 37
Teeswater		293	474	219,820	35,400	1,300	252,420	5,102	4 44
Tiverton		144	*500	73,840	3,750		77,590	1,574	3 17
Total urban	1895	5,295	9,770	3,303,202	344,400	46,900	3,704,502	75,009	4 25
	1894	5,129	9,714	3,264,927	329,275	48,400	3,642,652	77,318	4 50

*These figures are from returns of 1894, on account of 1895 not having been received in time.

ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.	No. of rate-payers.	No. of acres assessed.	Assessed values.				Taxes imposed for all purposes.	
			Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.
			$	$	$	$	$	$ c.
GREY:								
Artemesia	1,116	68,262	999,450	4,250		1,003,700	10,578	3 01
Bentinck	1,557	75,261	1,319,600	14,430		1,334,030	15,092	3 24
Collingwood	1,208	68,000	1,249,063	2,700		1,251,763	15,569	4 45
Derby	638	40,161	775,050			775,050	6,228	3 25
Egremont	840	72,499	1,523,364	8,450		1,531,814	12,233	3 62
Euphrasia	1,097	72,000	1,301,030	4,200	1,100	1,306,330	9,833	2 91
Glenelg	938	67,654	351,887	300	1,300	653,487	7,335	2 43
Holland	1,088	68,775	647,584	3,200	1,000	651,784	6,512	1 90
Keppel	1,133	90,067	680,722	2,200	75	682,997	11,476	2 96
Normanby	1,104	68,146	1,472,515	9,700		1,482,215	17,007	3 49
Osprey	1,024	70,797	800,595			800,595	6,968	2 10
Proton	944	79,450	802,735	1,950		804,685	10,291	3 32
St. Vincent	1,051	63,019	1,492,345			1,492,345	11,422	3 89
Sarawak	521	10,843	252,311			252,311	4,258	3 62
Sullivan	928	74,300	1,157,925	18,500		1,176,425	9,326	2 72
Sydenham	1,097	73,183	1,156,200	2,300		1,158,500	10,190	2 82
Total rural 1895	16,284	1,062,417	16,282,376	72,180	3,475	16,358,031	164,318	3 09
Total rural 1894	15,904	1,061,350	16,202,436	68,250	4,775	16,275,461	174,035	3 29
Durham	436	1,100	253,220	39,250	5,500	297,970	7,036	5 70
Meaford	645	1,500	526,947	36,800	5,200	568,947	11,452	5 96
Owen Sound	2,251	6,120	2,375,108	136,777	51 915	2,563,800	70,165	9 40
Thornbury	314	900	217,280	6 000		223,280	3,615	4 18
Dundalk	264	440	113,770	6,350		120,120	2,417	3 18
Markdale	212	950	144,760	13,575	1,600	159,935	1,656	2 24
Total urban 1895	4,122	11,010	3,631,085	238 752	64,215	3,934,052	96,341	7 42
Total urban 1894	4,124	11,010	3,668,601	228,950	42,825	3,940,376	96,977	7 66
SIMCOE:								
Adjala	720	45,860	848,685	3,600	1,400	853,685	8,041	4 18
Essa	1,163	68,487	1,320,464	3,100		1,323,564	14,125	3 55
Flos	991	63,602	630,497	7.200	1,200	638,897	13,373	4 06
Gwillimbury, W.	875	46,916	1,049,652	1,800		1,051,452	9,858	4 15
Innisfil	1,117	69,770	1,411,248	500	800	1,412,548	12,868	3 42
Matchedash	117	18,557	56,425			56,425	996	2 53
Medonte	1,179	66,288	512,524	4,050		516,574	10,198	2 81
Nottawasaga	1,599	89,580	2,213,277			2,213,277	22,984	4 66
Orillia	1,123	72,507	547,383	1,400	1,500	550,283	9,731	2 74
Oro	1,116	73,238	1,043,692			1,043,692	10,940	2 76
Sunnidale	638	54,857	473,025	4,000		477,025	9,494	4 05
Tay	1,073	46,774	475,767	12,850	2,300	490,917	9,530	2 58
Tecumseth	1,121	65,693	1,683,555	2,450		1,686,005	13,885	4 07
Tiny	1,032	78,205	648,733	5,050		653,783	12,333	3 33
Tossorontio	559	44,650	779,118	100		779,218	7,861	4 95
Vespra	962	62,060	514,332	1,100		515,432	9,487	3 47
Total rural 1895	15,385	967,044	14,208,377	47,200	7,200	14,262,777	175,704	3 57
Total rural 1894	15,281	963,071	14,516,922	45,545	9,100	14,571,567	176,663	3 58
Alliston	418	500	307,795	11,625	4.400	323,820	7,046	3 69
Barrie	1,220	2,100	1,299,810	77,900	58,650	1,436,360	30,552	6 08
Collingwood	1,860	4,400	1,185,023	44,500	14,300	1,243,823	31,512	5 82
Midland	707	467	417,300	3,950		427,250	9,740	5 27
Orillia	1,406	1,600	1,158,634	77,650	17,100	1,253,384	27,664	5 48
Penetanguishene	631	1,716	406,520	20,550	1,150	428,220	11,468	4 76
Stayner	411	1,139	200,155	12,800	400	213,355	4,772	3 94
Allandale	346	477	132,165			132,165	2,425	2 48
Beeton	180	425	108,000	6,150		114,150	2,396	3 55
Bradford	264	1,700	230,263	18,500		248.763	4,902	5 36
Creemore	268	515	67,525	6,325		73,850	2,159	3 74
Tottenham	188	400	117,715	17,300		135,015	2,953	5 43
Total urban 1895	7,839	15,439	5,630,905	303,250	96,000	6,030,155	137,589	5 18
Total urban 1894	7,346	15,396	5,557,640	328,680	91,200	5,977,520	134,171	5 22

ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.	No. of rate-payers.	No. of acres assessed.	Assessed values.				Taxes imposed for all purposes.	
			Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.
			$		$	$	$	$ c.
MIDDLESEX :								
Adelaide	854	44,190	868,044	..	.....	868,044	11,136	5 00
Biddulph	677	39,245	1,211,495	1,150	200	1,212,845	10,349	4 29
Caradoc	1,247	62,030	1,195,626	400	.....	1,196,026	19,301	5 04
Delaware	543	23,394	588,775	2,600	300	591,675	9,248	6 02
Dorchester, N	1,205	51,590	1,681,830	..	..	1,681,830	17,948	4 92
Ekfrid	971	53,444	2,003,040	29,360	300	2,032,700	17,127	6 43
Lobo	966	47,275	1,751,163	6,850	350	1,758,363	16,178	5 98
London	2,472	99,919	4,156,740	.....	6,200	4,162,940	39,422	4 59
McGillivray	1,026	66,842	2,033,210	.....	.....	2,033,210	15,253	5 09
Metcalfe	695	36,179	999,560	1,950	.....	1,001,510	11,727	7 63
Mosa	834	47,178	575,910	100	.....	576,010	13,176	4 90
Nissouri, W	823	49,580	1,496,800	..	..	1,496,800	15,736	6 12
Westminster	1,712	62,961	3,062,650	.....	.....	3,062,650	23,779	5 11
Williams, E	600	38,577	1,350,642	600	300	1,351,542	9,964	6 70
Williams, W	449	35,113	604,330	.....	...	604,330	8,650	5 37
Total rural { 1895	15,074	757,526	23,579,815	43,010	7,650	23,630,475	238,994	5 29
Total rural { 1894	15,315	758,151	23,686,575	57,135	8,110	23,751,620	247,506	5 56
Parkhill	527	561	286,805	26,200	2,850	315,855	7,786	4 96
Strathroy	939	2,200	868,770	52,840	16,476	938,086	20,747	6 79
Ailsa Craig	220	443	134,475	.....	..	134,475	2,513	3 53
Glencoe	*348	425	257,635	16,850	4,800	279,285	5,394	5 34
London West	635	414	336,355	3,000	.....	339,355	8,967	4 61
Lucan	*283	500	164,995	6,400	.....	171,395	3,661	4 56
Newbury	133	500	58,115	2,400	.....	60,515	1,414	3 51
Wardsville	134	417	54,980	2,700	100	57,780	1,183	3 55
Total urban { 1895	3,219	5,460	2,162,130	110,390	24,226	2,296,746	51,665	5 25
Total urban { 1894	3,244	5,404	2,133,238	106,910	23,450	2,263,598	52,248	5 41
OXFORD :								
Blandford	556	29,674	1,069,920	5,450	600	1,075,970	6,962	4 22
Blenheim	1,520	66,887	2,276,200	10,320	3,250	2,289,770	18,746	3 97
Dereham	1,220	65,130	2,360,595	9,800	1,350	2,371,745	18,929	5 30
Nissouri, E	969	46,484	2,135,120	8,000	2,100	2,145,220	10,491	3 89
Norwich, N	752	33,862	1,518,130	11,750	900	1,530,780	11,576	5 30
Norwich, S	974	35,523	952,910	43,895	800	997,605	9,460	3 86
Oxford, E	682	34,721	1,489,555	..	1,400	1,490,955	8,318	4 22
Oxford, N	453	21,135	882,952	1,200	1,000	885,152	6,026	4 50
Oxford, W	727	25,800	1,066,040	300	..	1,066,340	7,213	3 59
Zorra, E	1,013	57,518	2,704,075	8,650	2,650	2,715,375	20,704	5 50
Zorra, W	1,018	55,114	2,590,000	1,100	..	2,591,100	13,798	5 18
Total rural { 1895	9,884	471,848	19,045,497	100,465	14,050	19,160,012	132,223	4 56
Total rural { 1894	9,725	472,052	19,084,075	105,575	12,495	19,202,145	137,919	4 75
Ingersoll	1,686	2,200	1,326,770	49,450	27,930	1,404,150	31,363	7 01
Tilsonburg	873	2,000	649,360	62,350	2,400	714,110	14,937	6 93
Woodstock	2,315	1,525	2,529,100	127,400	65,750	2,722,250	60,239	6 85
Embro	263	1,340	183,058	7,300	2,600	192,958	2,576	4 17
Norwich	446	*575	260,830	14,800	4,600	280,230	6,104	5 22
Total urban { 1895	5,583	7,640	4,949 118	261,300	103,280	5,313,698	115,208	6 70
Total urban { 1894	5,475	7,640	4,916,778	252,900	101,515	5,271,193	118,617	6 84
BRANT :								
Brantford	1,695	71,951	3,789,835	100,400	9,350	3,899,585	24,382	4 62
Burford	1,564	66,[illegible]	2,178,540	62,985	1,100	2,242,625	15,680	3 39
Dumfries, S	883	46,644	2,290,511	33,850	5,300	2,329,661	14,474	5 08

*These are taken from return of 1894.

ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.	No. of rate-payers.	No. of acres as sessed.	Assessed values.				Taxes imposed for all purposes.	
			Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.
BRANT —*Con.*			$	$	$	$	$	$ c.
Oakland	342	10,416	391,997	13,250	700	405,947	3,068	3 99
Onondaga	388	20,549	705,638	.....	1,200	706,838	5,514	4 44
Total rural { 1895	4,872	215,875	9,356,521	210,485	17,650	9,584,656	63,118	4 28
Total rural { 1894	4,941	216,319	9,379,307	223,910	20,565	9,628,782	68,349	4 68
Paris, urban { 1895	1,143	685	949,576	100,089	15,710	1,065,375	19,844	6 51
Paris, urban { 1894	1,014	685	954,732	106,200	15,415	1,076,347	19,096	6 23
PERTH :								
Blanshard	787	45,906	2,102,400	1,300	.....	2,103,700	12,579	4 62
Downie	941	48,570	2,036,150	.....	800	2,036,950	13,347	4 65
Easthope, N	714	43,105	1,930,915	6,275	2,200	1,939,390	11,966	5 35
Easthope, S	608	23,817	1,122,540	2,100	.....	1,124,640	8,216	4 40
Ellice	715	54,334	1,555,190	.....	800	1,555,990	15,912	4 85
Elma	1,019	67,379	1,578,965	.....	.....	1,578,965	18,019	4 54
Fullarton	708	40,244	1,892,775	.....	.....	1,892,775	12,266	5 90
Hibbert	503	41,439	1,745,925	5,350	.....	1,751,275	11,103	4 97
Logan	855	53,774	1,867,250	.....	.....	1,867,250	14,403	5 26
Mornington	950	49,975	1,302,775	.....	400	1,303,175	15,295	5 11
Wallace	837	49,938	1,287,162	700	.....	1,287,862	12,118	4 14
Total rural { 1895	8,637	518,481	18,422,047	15,725	4,200	18,441,972	145,254	4 85
Total rural { 1894	8 383	518,168	18,356,746	15,525	2,800	18,375 071	148,287	4 96
Listowel	1,081	1,700	689,980	60,800	7,300	758,080	15,459	5 76
Mitchell	664	1,200	591,020	70,275	6,850	668,145	13,513	6 13
**St. Marys*	1,072	2,642	1,085,365	85,900	24,850	1,196.115	21,569	6 59
Milverton	134	460	108,465	5,750	.....	114,215	1,674	2 77
Total urban { 1895	2,951	6,002	2,474,830	222,725	39,000	2,736,555	52,215	5 96
Total urban { 1894	2,874	6,060	2,458,103	222,595	40,060	2,720,758	50,669	5 87
WELLINGTON :								
Arthur	831	64,430	1,296,210	450	.....	1,296,660	11,113	3 49
Eramosa	740	44,271	1,816,290	48,650	100	1,865,040	11,203	4 53
Erin	1,126	70,400	2,044,950	35,450	200	2,080,600	13,219	3 96
Garafraxa, W	881	47,568	1,083,765	2,550	.....	1,086,315	10,636	3 91
Guelph	545	36,723	1,472,800	26,450	8,400	1,507,650	9,414	4 16
Luther, W	424	50,192	609,760	2,000	.....	611,760	8,448	4 45
Maryborough	963	56,438	1,157,104	7,100	.....	1,164,204	14,364	4 76
Minto	1,010	69,437	1,684,170	.....	.....	1,684,170	17,079	5 53
Nichol	800	26,669	1,111,985	21,900	.....	1,133,885	7,242	3 66
Peel	1,173	74,375	1,881,205	.....	.....	1,881,205	16,450	3 97
Pilkington	553	29,115	1,043,121	.....	.....	1,043,121	7,420	5 26
Puslinch	870	58,503	1,402,990	39,620	2,510	1,445,120	11,496	3 32
Total rural { 1895	9,916	628,121	16,604,350	184.170	11,210	16,799,730	138,084	4 19
Total rural { 1894	9,676	626,966	16,611,886	176,805	14,210	16,802,901	137,064	4 09
Harriston	518	903	371,240	27,800	3,500	402,540	8,111	4 49
Mount Forest	638	1,414	550,525	52 100	12,300	614,925	13,528	5 54
Palmerston	708	919	357,060	43,500	4,650	405,210	9,761	4 92
Arthur	402	994	201,280	29,125	750	231,155	5,895	4 57
Clifford	190	443	106,925	11,500	.....	118,425	1 594	2 58
Drayton	276	414	139,8 0	12,900	.....	152,710	3,508	4 15
Elora	406	850	288,250	23,100	4,150	315,500	6,625	5 20
Erin	159	488	94,810	10,200	1,000	106,010	1,239	2 43
Fergus	547	980	374,771	35,100	5,100	414,971	7,731	4 77
Total urban { 1895	3,844	7,405	2,484,671	245,325	31,450	2,761,446	57,992	4 68
Total urban { 1894	3,640	7,412	2,453,646	234,100	31,550	2,719.296	57,693	4 80

*Separated from county for municipal purposes.

ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.		No. of rate-payers.	No. of acres assessed.	Assessed values.				Taxes imposed for all purposes.	
				Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.
				$	$	$	$	$	$ c.
WATERLOO:									
Dumfries, N.		785	44 [illegible]	2,093,265	11,050	1,900	2,106,215	8,887	3 94
Waterloo		1,583	81,870	3,910,730	.....	.....	3,910,730	26,088	3 77
Wellesley		1,045	65,934	2,063,175	.....	650	2,163,825	15,804	3 17
Wilmot		1,305	60,758	2,714,765	27,750	5,000	2,747,615	19,458	3 66
Woolwich		1,157	58,256	2,754,522	34,640	2,235	2,791,397	17,464	3 94
Total rural	1895	5,625	356,036	13,576,457	73,440	9,885	13,659,782	87,941	3 67
	1894	5,629	356,389	13,995,838	86,260	12,215	14,094,313	92,260	3 82
Berlin		2,015	2,885	2,427,691	169,700	38,900	2,636,291	44,850	6 64
Galt		1,991	1,477	2,590,945	204,840	64,110	2,859,895	49,465	6 64
Waterloo		880	2,860	1,164,720	146,175	23,000	1,333,895	19,103	5 92
Ayr		357	356	260,367	15,150	1,000	276,517	4,442	5 21
Elmira		240	529	276,650	24,900	1,150	302,700	2,940	2 85
Hespeler		448	611	488,995	23,850	8,000	520,845	6,708	3 62
New Hamburg		325	960	302,594	31,900	5,354	339,848	5,177	4 43
Preston		608	1,667	526,050	40,400	7,500	573,950	8,676	4 30
Total urban	1895	6,885	10,675	8,013,612	652,125	144,514	8,810,251	140,161	5 53
	1894	6,837	10,606	7,916,656	659,465	144,339	8,720,460	152 293	5 40
DUFFERIN:									
Amaranth		785	63,484	1,052,375	200	.....	1,052,575	12,962	4 94
Garafraxa, E		618	39,390	1,134,600	1,300	.....	1,135,900	8,927	4 46
Luther, E		545	39,030	651,450	15,000	.....	666,450	9,508	4 14
Melancthon		1,102	74,509	819,001	6,200	.....	825,201	14 362	3 96
Mono		1,141	69,788	734,600	3,150	.....	737 750	11,633	3 46
Mulmur		842	64,850	1,382,785	.....	.....	1,382,785	12 568	4 22
Total rural	1895	5,038	355,061	5,774,811	25,850	.....	5,800,661	69,960	4 15
	1894	4,813	356,772	5,786,445	24 210	.....	5,810,655	72,864	4 37
Orangeville		1,071	1,700	785,470	31,150	13,300	829,920	16 548	4 47
Shelburne		344	500	311,275	1,100	6,200	348,575	5,185	4 87
Total urban	1895	1,415	2,000	1,126,745	32,250	19,500	1,178,495	22,233	4 57
	1894	1,413	2,000	1,106,073	34,050	20,100	1,160,223	21,598	4 54
LINCOLN:									
Caistor		595	32,757	654,385	.....	900	655,285	6,476	3 87
Clinton		651	25,039	968,341	51,020	1,147	1,020,508	9,799	5 16
Gainsboro'		926	39,850	1,029,269	.....	.....	1,029,269	9,721	3 92
Grantham		697	18 931	725,950	10 240	400	776,640	8 968	5 60
Grimsby, N		596	15,648	734,870	14 670	1,300	750,840	7,054	6 07
Grimsby, S		555	18,138	562,654	12 983	.....	575,654	6,487	4 82
Louth		512	18,914	707,391	6,900	2,679	716,970	8,780	5 01
Niagara		711	22,203	880,310	2 000	.....	891,310	9,122	5 09
Total rural	1895	5,273	191,520	6,272,187	95,773	8,426	6,376,386	66,416	4 78
	1894	5,154	191,896	6,279,643	90,138	9,641	6,379,402	68,949	5 00
Niagara		560	591	469,720	16,975	600	487,295	9,284	7 18
Beamsville		221	520	166,[illegible]	16,500	1,200	183,000	3,862	4 17
Grimsby		846	488	191,750	9,000	700	201,450	3,445	3 88
Merritton		447	441	645,440	17,550	1,200	664,190	11,300	7 46
Port Dalhousie		250	400	133,155	.....	.....	133,155	3,493	3 95
Total urban	1895	1,764	2,450	1,604,985	58,875	3,700	1,667,560	32,774	5 67
	1894	1,663	2,423	1,604,065	63,770	11,850	1,679,790	30,606	5 63
WENTWORTH:									
Ancaster		1,411	45,852	2,220,700	12,550	1,800	2,234,450	13,200	3 24
Barton		1,056	13,100	1,235,814	.....	3,000	1,238,814	7,626	2 16
Beverly		1,316	70 111	1,990,906	5,950	.....	1,996,856	14,819	3 44

ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.		No. of rate-payers.	No. of acre as-sessed.	Assessed values.				Taxes imposed for all purposes.	
				Real property.	Per-sonal pro-perty.	Taxable income.	Total.	Total.	Per head.
					$	$	$	$	$ c.
WENTWORTH.—*Con.*									
Binbrook		500	26,386	965,350	2,400	400	968,150	4,924	3 41
Flamboro', E		817	33,828	1,695,600	7,500	3,925	1.707,025	7,649	3 02
Flamboro', W		1.085	31,140	1,286,719	6,050	2,400	1,295,169	10,575	3 67
Glanford		544	23,529	1,048,775	15,770	3,260	1,067,805	4,742	3 10
Saltfleet		1,053	28,332	1,723,067	2,700	1,830	1,727,597	10 737	4 16
Total	1895	7,782	272,278	12,165,831	52,920	17,115	12,235,866	74,166	3 25
	1894	7,668	271,733	12,218,586	57,870	19,165	12,295,621	72,491	3 18
Dundas		1,162	550	842,465	89,350	26,850	958,665	19,504	6 55
Waterdown		257	341	174,800	7,850	1,550	184,200	1,728	2 48
Total urban	1895	1,419	891	1,017,265	97,200	28,400	1,142,865	21,232	5 77
	1894	1,227	905	1,030,120	82,650	26,100	1,138,870	20,784	5 55
HALTON:									
Esquesing		1,265	66,696	2,223,507	38,690	5,100	2,267,297	11,966	3 16
Nassagaweya		646	44,801	984,670	15,665	5,160	1,005,495	950	2 69
Nelson		1,007	46,315	1,802,715	3,600		1,806,315	10,588	3 72
Trafalgar		1,288	67,021	2,469,290	2,650	1,900	2,473,840	14,158	3 85
Total rural	1895	4,206	224,833	7,480,182	60,605	12,160	7.552.947	43,662	3 39
	1894	4,053	225,120	7,500,762	63,644	16,540	7,580,946	44,354	3 43
Milton		430	*400	389,664	26,950	8,950	425,564	6,383	4 69
Oakville		655	1,300	473,982	12,900	2,400	489,282	11,336	6 71
Acton		275	240	248,345	20,300	800	269,445	4,375	3 46
Burlington		486	490	358,102	10,400	13,400	381,902	4.750	3 75
Georgetown		449	1,087	306,820	31,450	3,750	342,020	6,962	4 81
Total urban	1895	2,295	3,517	1,776,913	102,000	29,300	1,908,213	33,806	4 81
	1894	2,016	3,472	1,778,310	112,900	13,700	1,904,910	31,655	4 65
PEEL:									
Albion		1,019	55,845	1,166,775	2,750		1,169 525	9,602	3 43
Caledon		1,546	68,260	1,801,400	9,100	400	1,810,900	12,714	3 15
Chinguacousy		1,409	80,063	2,916.445	3,900		2,920,345	17,406	4 16
Toronto		1,767	65,157	2 721,725	6,800	3,100	2,731,625	21,558	4 16
Toronto Gore		301	19,009	739,445	750		740,195	5,136	4 64
Total rural	1895	6,042	288,334	9,345,790	23,300	3,500	9,372,590	66,416	3 84
	1894	6,071	288 451	9,382,640	25,600	7,000	9,415,240	68,141	3 93
Brampton		1,132	1,190	911,835	58,550	21,900	992,285	19,679	6 49
Bolton		246	475	136,940	9,450	2,300	148,690	2,261	3 29
Streetsville		229	506	146,780	12,550		159,330	1,968	2 93
Total urban	1895	1,607	2,171	1,195,555	80,550	24,200	1,300,305	23,908	5 45
	1894	1,665	2,202	1,179,920	80,075	25,150	1,285,145	23,884	5 39
YORK:									
Etobicoke		1,539	28,532	2,013,565	3,500	5,500	2,022,565	20,991	5 82
Georgina		615	34,983	652,160	7,200	500	659,860	6,962	4 25
Gwillimbury E.		1,288	58,048	1,286,760		400	1,287,160	12,066	4 19
Gwillimbury W.		637	31,572	737,900	2,500		740,400	6,951	5 06
King		2,020	87,064	2,814,745	19,900	3,200	2,837,845	18,728	3 57
Markham		2,215	66,758	3,256,395	20,450	1,700	3,278,545	21,092	4 06
Scarborough		1,376	42,981	2,216,112	4,400	2,900	2,223,412	15,226	3 99
Vaughan		1,088	66,782	2,940,895	7,200		2,948,095	20,699	4 46

* Taken from return of 1894.

ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.		No. of rate-payers.	No. of acres assessed.	Assessed values.				Taxes imposed for all purposes.	
				Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.
				$	$	$	$	$	$ c.
YORK.—*Con.*									
Whitchurch		1,238	60,051	1,620,480	3,100	.....	1,623,580	10,500	2 77
York		5,450	58,990	6,957,378	.....	.....	6,957,378	79,002	9 85
Total rural	1895	17,466	534,771	23,596,390	68,250	14,200	23,678,840	212,217	5 28
	1894	17,514	536,339	24,297,976	70,350	18,700	24,387,026	207,508	5 09
Aurora		819	1,100	442,607	13,150	550	456,307	9,817	5 68
Newmarket		718	674	477,037	34,125	7,600	518,762	12,685	6 26
North Toronto		1,400	2,500	1,280,606	.....	400	1,281,006	21,003	12 81
**Toronto Junction*		2,369	1,226	4,398,882	171,225	.....	4,570,107	88,658	20 00
East Toronto		512	500	485,000	.....	.....	485,000	9,883	8 78
Holland Landing		147	1,988	72,510	700	.....	73,210	1,000	2 20
Markham		341	422	221,835	9,150	3,350	234,335	6,616	6 24
Richmond Hill		239	466	156,950	3,500	1,200	161,650	1,971	2 74
Stouffville		476	403	294,050	16,060	900	310,950	3,650	2 81
Sutton		240	484	117,900	3,700	150	121,750	1,921	3 00
Weston		401	341	318,050	9,200	3,300	330,550	4,229	3 40
Woodbridge		263	509	109,175	1,300	.....	110,475	1,606	2 11
Total urban	1895	7,925	10,604	8,374,602	262,050	17,450	8,654,102	163,039	9 52
	1894	7,742	10,463	8,410,054	270,650	16,350	8,697,054	159,496	9 34
ONTARIO:									
Brock		1,324	66,208	2,094,460	6,750	.....	2,101,210	13,658	3 78
Mara		863	60,669	941,017	18,750	1,500	961,267	13,056	4 35
Pickering		1,959	71,412	3,497,930	77,625	4,600	3,580,155	21,737	4 01
Rama		446	33,632	166,452	950	.....	167,402	4,318	3 22
Reach		1,363	63,682	2,041,679	.....	.....	2,041,679	12,945	3 39
Scott		695	49,196	1,020,875	.....	.....	1,020,875	7,440	3 35
Scugog		136	9,352	289,730	.....	.....	289,730	1,902	3 74
Thorah		552	32,090	531,810	.....	.....	531,810	5,376	3 71
Uxbridge		1,077	51,997	996,580	3,600	.....	1,000,180	11,169	3 91
Whitby E		895	31,175	1,682,620	46,350	3,000	1,731,970	9,038	3 39
Whitby		847	30,750	1,546,425	36,600	.....	1,583,025	10,996	4 75
Total rural	1895	10,157	500,113	14,809,578	190,625	9,100	15,009,303	111,645	3 82
	1894	10,427	500,447	14,870,749	216,325	13,650	15,100,724	115,921	4 04
Oshawa		1,505	2,400	1,013,270	52,650	20,900	1,086,820	23,682	5 96
Uxbridge		738	500	527,725	43,600	12,325	583,650	11,820	6 05
Whitby		899	3,800	811,620	47,600	18,150	877,370	22,624	8 75
Beaverton		288	430	153,985	3,550	.....	157,535	2,750	3 78
Cannington		375	470	256,400	14,400	.....	270,800	4,062	3 56
Port Perry		538	500	341,950	38,710	4,650	385,310	9,478	6 11
Total urban	1895	4,343	8,123	3,104,950	200,510	56,025	3,361 485	74,416	6 24
	1894	3,907	8,100	3,142,478	217,030	52,050	3,411,558	75,425	6 24
DURHAM:									
Cartwright		683	36,304	698,900	23,200	800	723,000	5,821	3 05
Cavan		925	63,424	1,562,475	1,000	.....	1,563,475	11,267	4 02
Clarke		1,387	68,288	2,118,025	7,500	.....	2,125,525	13,432	3 16
Darlington		1,313	68,369	2,502,000	1,600	.....	2,503,600	16,177	3 60
Hope		1,228	63,818	2,332,588	7,500	6,100	2,346,188	11,347	3 06
Manvers		1,047	69,108	890,296	5,600	.....	895,896	9,955	2 97
Total rural	1895	6,783	370,268	10,104,244	46,500	6,900	10,157,644	67,999	3 32
	1894	6,774	370,678	10,163,464	49,750	9,000	10,222,214	71,501	3 51
Bowmanville		911	3,000	298,425	89,930	21,271	1,109,626	20,563	7 15
Port Hope		1,896	1,032	1,335,962	135,900	62,180	1,533,642	31,620	6 67

* Separated from county for municipal purposes.

ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.	No. of rate-payers.	No. of acres as-sessed.	Assessed values.				Taxes imposed for all purposes.	
			Real property.	Per-sonal pro-perty.	Taxable income.	Total.	Total.	Per head.
			$	$	$	$	$	$ c.
DURHAM.—*Con.*								
Millbrook	271	426	179,015	8,700	3,732	191,447	3,093	3 49
Newcastle	269	1,949	190,641	2,575	2,850	196,066	3,458	5 03
Total urban 1895	3,347	6,417	2,704,043	236,705	90,036	3,030,784	58,634	6 39
Total urban 1894	3,302	6,380	2,703,292	245,230	98,040	3,046,562	55,169	5 93
†NORTHUMBERLAND:								
Alnwick	253	16,728	351,250			351,250	3,135	3 03
Brighton	1,195	49,160	1,201,300	4,250		1,205 550	8,520	3 02
Cramahe	1,060	46,242	1,092,285	1,000		1,093,285	9,703	3 58
Haldimand	1,364	76,557	1,770,750	2,100	300	1,773,150	15,340	3 66
Hamilton	1,342	62,140	2,114,730	12,130	4,500	2,131,360	13,403	3 17
Monaghan S.	287	18,319	553,700	4,600		558,300	3,700	3 57
Murray	1,092	48,510	1,194,475		2,250	1,196,725	8,194	2 91
Percy	1,019	51,263	950,397	7,800	2,500	960 697	9,946	3 19
Seymour	1,051	66,564	1,168,270	1,475		1,169,745	12,595	3 94
Total rural 1895	8,663	435,563	10,397,157	33,355	9,550	10,440,062	84,539	3 36
Total rural 1894	8,392	434,043	10 461,642	39,430	12,300	10,513,372	85,765	3 42
Cobourg	1,776	2,413	1,252,728	94,300	31,550	1,378,578	38,559	9 04
Brighton	*512	2,793	417,505	28,350	1,500	447,355	5,729	4 00
Campbellford	*759	600	738,556	35,375	15,725	789,656	13,445	5 96
Colborne	355	1,057	275,750	8,350	3,070	287,170	6,141	6 12
Hastings	254	557	160,500	5,950	1,000	167,450	3,724	5 04
Total urban 1895	3,656	7,420	2,845,039	172,325	52,845	3,070,209	67,598	6 97
Total urban 1894	3,737	7,453	2,775,466	240,450	47,370	3,063,286	64,436	6 66
PRINCE EDWARD:								
Ameliasburg	1,104	41,507	1,128,575		400	1,128,975	11,813	3 84
Athol	499	23,412	486,635		500	487,135	3,582	3 02
Hallowell	1,205	43,261	1,135,555	16,775	2,575	1,154,905	9,547	3 05
Hillier	573	31,330	738,495	12,480	600	751,575	7,005	4 27
Marysburg N.	520	23,465	477,860	25,277		503.137	4,008	3 04
Marysburg S.	522	24,407	353,460	1,800	740	356,000	4,108	2 98
Sophiasburg	750	42,972	1,015,199	4,200	600	1,019,999	7,533	3 95
Total rural 1895	5,173	230,354	5,335,779	60,532	5,415	5,401,726	47,596	3 49
Total rural 1894	5,167	229,998	5,372,529	63,845	6,130	5,442,504	48,670	3 52
Picton	1,158	552	1,106,200	102,200	13,650	1,222,050	18,935	5 39
Wellington	220	1,524	187,725	1,500	1,800	191.025	1,910	3 89
Total urban 1895	1,378	2,076	1,293,925	103,700	15,450	1,413,075	20,845	5 27
Total urban 1894	1,279	2,076	1,263,625	87,650	17,000	1,368,275	19,944	5 32
LENNOX AND ADDINGTON:								
Adolphustown	183	11,306	341,582	3,260		344,842	3,202	5 84
Amherst Island	192	14,644	342,870	3,500	1,200	347,570	3,482	4 11
Camden E	1,546	84,347	1,394,805	36,670	3,900	1,435.375	23,446	5 98
Denbigh, etc.	264	43,966	54,673			54,673	1,466	1 51
Ernestown	1,273	61,082	1,495,000	1,000	3,975	1,499,975	14,750	4 41
Fredericksburg N.	576	23,317	770,635	21,000		791,635	6 351	4 46
Fredericksburg S.	360	20,348	621,570			621,570	5,701	5 51
Kaladar, Anglesea, etc.	413	53,783	69,176			69,176	2,285	2 03
Richmond	1,031	50,937	863,385			863,385	10 725	4 86
Sheffield	805	61,011	655,170	8,750		663,920	9,076	4 45
Total rural 1895	6,643	424,741	6,608,866	74,180	9.075	6,692,121	80,484	4 61
Total rural 1894	6,459	430.951	6,611,769	63,340	9,600	6,684,709	79,297	4 59

* Taken from return of 1894. † United with Durham for municipal purposes.

ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.		No. of rate-payers.	No. of acres assessed.	Assessed values.				Taxes imposed for all purposes.	
				Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.
				$	$	$	$	$	
LENNOX AND ADDINGTON.—*Con*									
Napanee		1,005	*372	885,595	28,760	27,100	941,455	25,825	8 46
Bath		155	2,229	112,254	2,100	2,675	117,029	1,637	3 72
Newburgh		278	3,200	103,355	.....	2,750	106,105	3,490	5 74
Total urban	1895	1,433	5,801	1,101,204	30,860	32,525	1,164,589	30,942	7 55
	1894	1,438	5,774	1,113,611	30,385	31,575	1,175,571	30,528	7 59
FRONTENAC:									
Barrie		208	24,197	38,145	.....	.....	38,145	1,162	1 82
Bedford		448	63,707	177,521	.....	.....	177,521	4,551	2 87
Clarendon and Miller		306	44,529	80,281	.....	.....	80,281	1,711	2 12
Hinchinbrooke		352	64,000	186,260	1,050	.....	187,310	4,294	3 53
Howe Island		99	8,024	52,740	.....	.....	52,740	1,803	6 68
Kennebec		297	40,158	104,952	.....	.....	104,952	2,886	2 34
Kingston		*850	52,820	1,248,795	.....	.....	1,248,795	13,717	4 58
Loughborough		669	52,456	381,065	750	625	382,440	7,450	4 42
Olden		269	42,194	95,465	.....	.....	95,465	3,519	3 78
Oso		345	41,379	74,576	850	.....	75,426	2,516	2 38
Palmerston and Canonto		197	50,440	64,848	4,375	.....	69,223	2,215	2 28
Pittsburg		691	48,166	808,949	.....	.....	808,949	11,834	4 97
Portland		*648	63,378	459,344	5,500	925	465,769	8,210	4 01
Storrington		653	55,294	430,600	.....	.....	430,600	7,788	4 52
Wolfe Island		551	30,810	608,257	3,400	.....	611,657	7,400	5 02
Total rural	1895	6,583	680,843	4,851,778	15,925	1,350	4,829,253	81,256	3 86
	1894	6,562	673,058	4,820,849	12,890	4,325	4,838,064	83,097	3 94
Garden Island		63	77	20,600	20,000	6,000	56,600	1,784	4 78
Portsmouth		255	150	100,985	5,130	5,750	120,865	2,561	3 51
Total urban	1895	318	227	140,585	25,130	11,750	177,465	4,325	3 94
	1894	317	227	139,488	24,350	11,650	175,565	4,068	3 90
LEEDS:									
Bastard and Burgess S.		1,059	61,844	754,505	.....	600	755,105	11,239	4 14
Crosby, N		510	44,091	359,355	6,100	1,500	366,955	6,316	4 14
Crosby, S		586	36,860	393,170	1,200	.....	394,370	5,622	3 26
Elizabethtown		1,948	76,795	1,396,920	.....	5,550	1,402,470	16,407	4 22
Lansdowne, S		730	23,115	464,995	1,800	.....	466,795	3,056	3 89
Kitley		800	49,763	1,025,290	.....	550	1,025,840	8,140	4 39
Leeds and Lansdowne, Fr		1,230	68,970	980,845	29,055	710	1,010,611	12,806	4 33
Leeds and Lansdowne, Rear		760	44,800	696,240	11,020	600	707,775	7,314	3 34
Yonge and Escott, Front		941	51,500	771,845	6,450	5,150	783,615	9,585	3 97
Yonge and Escott, Rear		471	29,084	420,565	.....	300	420,865	7,087	5 89
Total rural	1895	8,035	409,872	7,093,494	56,705	14,710	7,117,881	88,032	4 12
	1894	8,059	409,872	7,083,061	57,520	8,150	7,148,710	82,171	3 77
†Brockville		1,993	1,243	3,071,588	252,300	62,000	3,385,888	93,274	10 21
Gananoque		1,316	1,210	1,018,065	3,400	.....	1,021,465	21,323	5 89
Athens		447	493	106,025	3,700	.....	109,725	3,782	4 37
Newboro		126	885	89,190	1,500	1,200	91,690	1,824	4 15
Total urban	1895	3,882	3,840	4,284,868	260,150	63,200	4,708,598	120,203	8 55
	1894	3,679	3,834	4,297,135	255,045	37,600	4,793,130	100,834	7 51
‡GRENVILLE:									
Augusta		1,250	74,788	1,130,256	.....	2,100	1,132,356	13,125	3 28
Edwardsburg		1,581	69,492	1,167,900	1,700	.....	1,169,600	12,152	3 24
Gower, S		360	23,887	301,650	.....	.....	315,650	2,684	3 49

* Taken from return of 1894. † Separated from county for municipal purposes.
‡ United with Leeds for municipal purposes.

ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.		No. of rate-payers.	No of acres as-sessed.	Assessed values.				Taxes imposed for all purposes.	
				Real property.	Per-sonal pro-perty.	Taxable income.	Total.	Total.	Per head.
				$	$	$	$	$	$ c.
GRENVILLE.—*Con.*									
Oxford on Rideau		924	59,278	759,782	150	1,500	761,432	9,143	3 00
Wolford		652	46,179	1,025,735	6,250	.....	1,031,985	5,954	3 28
Total rural	1895	4,422	271,508	4,389,308	7 900	3,600	4,400 808	42 068	3 24
	1894	4.336	271,065	4,421,097	7,150	3,730	4,431,977	42,003	3 20
†*Prescott*		820	*1,182	816,725	28,850	9,200	854,775	17,403	6 18
Cardinal		275	400	263,055	27,800	6,850	297,705	2.509	2 52
Kemptville		256	354	230,220	20,600	2,700	253.520	6,918	5 74
Merrickville		554	732	264,740	20,400	12,725	297,865	4,815	4 60
Total urban	1895	1,705	2,668	1,574,710	97,650	31,475	1 703,865	31.645	5 22
	1894	1,789	2,721	1,556,315	95,350	32,325	1,683,990	30,799	4 97
DUNDAS:									
Matilda		1,271	62,602	1,426,025	700	5,400	1.432,125	17,640	4 74
Mountain		927	57,600	1,491,275	9,600	1,660	1,502,535	11,501	4 09
Williamsburg		1,204	59,607	1,477,865	3,700	.....	1,481,565	12,873	3 47
Winchester		1,053	57,135	1,333,465	3,525	.....	1,336,990	16,152	4 88
Total rural	1895	4,455	236,944	5,728.630	17,525	7,060	5,753.215	58,166	4 29
	1894	4,393	237,106	5,805,100	17.400	11,025	5,833,525	56,611	4 15
Chesterville		262	500	110,825	11,250	.....	122,075	1,565	2 02
Iroquois		363	800	324,750	20,000	900	345,650	5.590	5 04
Morrisburg		450	*1,067	643,300	44.250	30.050	717.600	10,177	5 86
Winchester		287	500	193,950	26,775	3,500	224,225	3,391	3 55
Total urban	1895	1,362	2,867	1,272,825	102,275	34,450	1,409,550	20,723	4 53
	1894	1,234	2,867	1,264,900	96,050	34,350	1,395,350	20.716	4 63
‡STORMONT:									
Cornwall		1,265	64,211	1,030,846	14,250	.....	1,045,096	12.878	2 44
Finch		915	51,266	661.675	2,250	.....	663,925	10,168	3 40
Osnabruck		1,589	62,040	1,120,000	17,800	2,800	1,140,600	14,140	3 09
Roxborough		995	72.719	753,775	.....	3,650	757,425	9,115	2 15
Total rural	1895	4,764	250,236	3.566,296	34,300	6,450	3.607,046	46,301	2 71
	1894	4,663	250,985	3,521,972	29,835	7,250	3,559,057	44,431	2 58
Cornwall, urban	1895	1,511	*740	1,521,980	51,450	26,700	1,600,130	34,116	5 63
	1894	1,668	750	1,385,689	48,700	21,000	1,455,389	30,994	5 15
‡GLENGARRY:									
Charlottenburg		1,393	81,963	1,118,870	33,600	2,020	1,154,490	14,927	2 91
Kenyon		1,178	77,423	749,840	2,050	.....	751,890	11,754	2 73
Lancaster		1,008	57,041	912.655	1,450	500	914,605	9,523	2 68
Lochiel		840	71,624	995,985	.....	.....	995,985	11,799	2 62
Total rural	1895	4,419	288.051	3,777,350	37,100	2,520	3,816,970	48,003	2 75
	1894	4,148	285,811	3,777,135	37,610	21,340	3,836,085	48,059	2 91
Alexandria		331	371	200,843	5,000	.....	205,843	4,287	2 70
Lancaster		134	128	79,120	.....	.....	79,120	1,449	2 88
Maxville		173	454	51,555	1,775	.....	53,330	1,121	2 04
Total urban	1895	638	953	331,518	6,775	.....	338,293	6,857	2 60
	1894	743	943	329,608	5,850	800	336,258	6,157	2 44

* Taken from return of 1894. †Separated from county for municipal purposes.
‡ United to Dundas for municipal purposes.

ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.		No. of rate-payers.	No of acres assessed.	Assessed values.				Taxes imposed for all purposes.	
				Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.
				$	$	$	$	$	$ c.
PRESCOTT:									
Alfred		556	43,856	420,525	.....	.....	420,525	6,225	1 98
Caledonia		548	45,472	270,150	500	.....	270,650	4,888	2 87
Hawkesbury, E		1,125	56,411	446,330	3,055	.....	449,385	8,540	1 71
Hawkesbury, W		570	25,102	344,496	11,650	450	356,596	9,180	3 71
Longueuil		216	17,162	173,575	.....	.....	173,575	2,408	2 47
Plantagenet, N		730	50,139	411,400	4,250	.....	415,650	9,725	2 64
Plantagenet, S		732	48,630	373,980	7,140	.....	381,120	7,877	2 66
Total rural	1895	4,477	286,772	2,440,456	26,595	450	2,467,501	48,843	2 45
	1894	4,529	285,757	2,474,120	20,055	1,740	2,495,916	46,961	2 39
*Hawkesbury		389	5,400	210,255	12,150	4,150	226,555	5,936	2 87
L'Orignal		250	3,889	114,775	1,000	1,400	117,175	2,572	2 66
Total urban	1895	639	9,289	325,030	13,150	5,550	343,730	8,508	2 81
	1894	636	9,283	320,375	12,750	5,950	339,075	8,010	2 78
†RUSSELL:									
Cambridge		673	59,731	421,475	.....	.....	421,475	5,988	2 30
Clarence		1,082	69,769	335,351	3,500	.....	338,851	10,415	2 30
Cumberland		946	74,600	454,676	3,500	.....	458,176	10,351	2 87
Russell		951	47,187	608,915	4,375	.....	613,290	8,706	2 96
Total rural	1895	3,652	251,287	1,820,417	11,375	.....	1,831,792	35,460	2 59
	1894	3,499	252,139	1,814,249	31,850	.....	1,846,099	34,083	2 50
Casselman		‡171	1,200	54,300	.....	.....	54,300	1,693	2 13
Rockland		302	500	46,770	3,300	200	50,270	2,732	1 77
Total urban	1895	473	1,700	101,070	3,300	200	104,570	4,425	1 90
	1894	434	1,700	118,805	3,050	.....	121,855	3,581	1 86
CARLETON:									
Fitzroy		715	60,136	766,157	4,000	.....	770,157	9,195	3 57
Gloucester		2,125	85,212	1,419,520	1,500	.....	1,421,020	18,517	3 17
Goulbourn		571	64,831	843,005	.....	.....	843,005	9,568	3 85
Gower, N		566	32,968	906,135	5,750	.....	911,885	6,977	3 19
Huntley		487	61,432	448,510	1,300	.....	449,810	6,878	3 20
March		‡375	28,001	370,491	.....	.....	370,491	4,172	3 77
Marlborough		681	54,993	456,700	.....	.....	456,700	8,080	5 53
Nepean		1,257	58,370	2,079,540	2,400	.....	2,081,940	15,534	3 58
Osgoode		1,333	91,106	1,310,925	6,700	.....	1,317,625	14,397	3 33
Torbolton		312	25,899	149,110	.....	.....	149,110	3,385	3 64
Total rural	1895	8,322	564,948	8,750,093	21,650	.....	8,771,743	96,703	3 53
	1894	8,248	565,941	8,579,656	20,200	200	8,600,056	94,256	3 45
Hintonburg		587	459	283,913	900	.....	284,813	5,404	2 80
Ottawa East		241	315	145,000	1,300	.....	146,300	2,068	2 68
Richmond		126	1,474	55,775	1,550	.....	57,325	1,127	3 16
Total urban	1895	954	2,248	484,688	3,750	.....	488,438	8,599	2 80
	1894	811	2,279	432,915	6,550	.....	439,465	7,226	2 54
RENFREW:									
Admaston		540	68,991	196,877	350	.....	197,227	5,054	2 41
Algona S		168	28,918	24,973	.....	.....	24,973	1,046	1 26
Alice and Fraser		382	54,151	112,167	.....	.....	112,167	3,209	1 82
Bagot and Blithefield		340	54,370	71,379	1,850	.....	73,229	3,203	2 23
Bromley		508	49,769	160,537	2,700	.....	163,237	4,847	2 67

* Becomes a town in 1896. † United with Prescott for municipal purposes.
‡ Taken from return of 1894.

ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.	No. of rate-payers.	No. of acres assessed.	Assessed values.				Taxes imposed for all purposes.	
			Real property.	Personal property.	Taxable income.	Total	Total.	Per head.
			$	$	$	$	$	$ c.
RENFREW.—*Con.*								
Brougham	130	16,569	21,565			21,565	944	1 76
Brudenell and Lynedoch	280	44 599	57,415	2,900		60,315	1,914	1 46
Grattan	361	59,035	58,505			58,505	2,819	1 93
Griffith and Matawatchan	126	21,735	31,800	200		32,000	1,176	1 64
Hagarty, Jones, etc	409	71,650	65,100			65,100	2,514	1 14
Head, Clara and Maria	113	17,991	35,325			35,325	1,207	2 97
Horton	292	37,600	203,242			203,242	3,778	2 78
McNab	840	62,359	454,220	7,990		462,210	7,760	2 24
Pembroke	278	8,372	100,332			100,332	1,698	2 34
Petewawa	206	26,487	40,398			40 398	1,492	1 73
Radcliffe and Raglan	211	35,604	40,285			40,285	1,923	1 93
Rolph, Buchanan and Wylie	222	39,357	54,271			54,271	1,928	2 22
Ross	618	52 015	231,030	1,750		232,780	5,873	2 17
Sebastopol	136	28,113	27,896			27,896	854	1 24
Stafford	291	21,431	76,170			76,170	2,342	2 30
Westmeath	750	70,161	282,997	3,215	750	286 962	9,642	3 19
Wilberforce and Algona N.	444	67,187	91,794	380		92,174	3,822	1 70
Total rural (1895)	7,645	936,354	2,438,278	21,335	750	2,460,963	69,045	2 12
Total rural (1894)	7,559	934,911	2,425,298	23,390	12,320	2,461,008	69,981	2 19
Arnprior	800	923	594,345	58,050	8,100	660,495	15,158	4 08
Pembroke	929	587	946,5 0	133,675	25,750	1,145,925	26,0 3	5 61
Renfrew	790	*2,177	622,165	61,250	1,300	684,715	16,932	5 82
Eganville	241	438	77,385	6,875		84,260	3,605	3 33
Total urban (1895)	2,760	4,125	2,280,395	259,850	35,150	2,575,395	61,728	5 00
Total urban (1894)	2,690	4,145	2,207,145	248,800	38,500	2,494,445	55,473	4 76
LANARK:								
Bathurst	744	60.884	655,120	23,749	500	679,360	6,974	2 72
Beckwith	575	57,183	489,795	17,540		507,335	6,007	3 62
Burgess N	2 7	32,493	180,805	10,250		191,075	2,299	2 62
Dalhousie and Sherbrooke N.	137	72,587	251,400	2,800	250	254,450	4,447	2 28
Darling	198	43,457	65,415			65,415	1,543	2 11
Drummond	643	57,796	690,152	22,360		712,512	6,767	3 47
Elmsley N	352	27,797	327,239	14,126	400	341,765	3,196	3 03
Lanark	480	57 046	426,910	25,405		452,315	5,213	3 02
Lavant	154	43,345	54,842	2,760		57,602	1,433	2 27
Montague	704	62 527	594,851	9,050		603 901	6,603	3 16
Pakenham	402	56,480	378 600	11.350		389,950	6,867	3 75
Ramsay	694	61,493	642,260	34,775		677,035	8,218	3 77
Sherbrooke S	287	37,338	89,252	425		89,677	1,334	1 46
Total rural (1895)	5,997	670,976	4,816,661	174,581	1,150	5,022,392	60,901	3 02
Total rural (1894)	5,859	673,609	4,859,915	176,818	1,150	5,037,883	59,745	3 03
Almonte	795	*700	719,289	91,750	8,750	819,789	14,765	5 02
Carleton Place	1,184	*950	749,535	60,450	8,100	818,085	16,517	3 83
†*Perth*	815	*1,000	1,050,005	109,720	41,550	1,201,275	20,180	6 39
Smith's Falls	1,138	900	966,805	53,200	4,500	1,024,505	25,255	5 95
Lanark	201	2,350	144,365	15,500	1,430	161,295	3,496	4 10
Total urban (1895)	4,133	5,500	3,629,999	330,620	64,330	4,024,949	80,213	5 17
Total urban (1894)	4,078	5,904	3,617,899	343,710	62,930	4,024,539	77,154	5 04
VICTORIA:								
Bexley	312	28,499	131,992	200		132,192	3,639	4 07
Carden	215	58,320	61,213			61,213	2,053	2 84
Dalton	141	27,097	34,275			34,275	1,022	1 97
Eldon	780	61,667	726,360	3,175		729,535	11,563	4 28

* Taken from return of 1894. † Separated from county for municipal purposes.

ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.	No. of rate-payers.	No. of acres assessed.	Assessed values.				Taxes imposed for all purposes.	
			Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.
			$	$	$	$	$	$ c.
VICTORIA.—*Con.*								
Emily	795	58,264	989,196	.....	.....	989,196	10,089	4 78
Fenelon	839	51,644	731,600	.....	.....	731,600	8,325	3 60
Laxton, Digby and Longford	198	70,672	74,439	.....	.....	74,439	2,599	3 28
Mariposa	1,468	74,952	2,606,411	1,400	.....	2,607,811	19,383	5 08
Ops	736	56,107	1,570,690	.....	.....	1,570,690	15,358	6 27
Somerville	457	62,278	203,875	1,715	.....	205,590	5,865	3 29
Verulam	673	55,799	532,155	600	.....	532,755	8,523	4 58
Total rural (1895	6,614	585,299	7,662,206	7,090	.....	7,669,296	88,419	4 43
Total rural (1894	6,626	585,461	7,692,490	5,265	.....	7,697,755	90,382	4 54
Lindsay	1,763	1,550	1,502,170	329,715	39,450	1,871,335	47,954	7 05
Bobcaygeon	280	434	138,390	12,850	.....	151,240	3,377	4 09
Fenelon Falls	331	500	159,317	9,350	.....	168,667	5,060	4 28
Omemee	276	414	97,856	3,500	2,050	103,406	2,284	3 95
Woodville	115	460	70,880	4,400	.....	75,280	951	1 72
Total urban (1895	2,765	3,358	1,968,613	359,815	41,500	2,369,928	59,626	6 43
Total urban (1894	2,844	3,447	1,972,408	380,071	40,725	2,393,204	58,189	5 36
PETERBOROUGH:								
Asphodel	599	37,784	850,485	800	.....	851,285	7,700	4 85
Belmont and Methuen	539	77,871	197,235	.....	.....	197,235	5,035	2 62
Burleigh and Anstruther	233	31,243	52,904	.....	.....	52,904	2,225	3 82
Chandos	302	39,869	54,960	.....	.....	54,960	1,986	3 12
Douro	570	38,749	798,380	.....	.....	798,380	6,774	3 57
Dummer	691	66,516	620,760	.....	.....	620,760	5,852	2 81
Enniskillen	240	17,284	367,946	.....	.....	367,946	2,716	3 08
Galway and Cavendish	294	46,949	52,199	.....	.....	52,199	1,344	1 46
Harvey	431	66,298	173,002	.....	.....	173,002	2,941	2 76
Monaghan N	382	13,960	640,610	.....	.....	640,610	3,802	1 62
Otonabee	1,031	64,373	2,045,100	8,252	1,000	2,054,352	14,165	4 24
Smith	1,001	57,718	1,440,970	.....	.....	1,440,970	11,954	4 09
Total rural (1895	6,313	558,814	7,294,551	9,052	1,000	7,304,603	65,694	3 55
Total rural (1894	6,334	551,812	7,332,333	9,200	1,500	7,343,033	65,906	3 58
†*Peterborough*	3,253	*1,282	3,944,700	226,900	142,718	4,314,318	70,479	6 30
Ashburnham	556	944	419,086	14,100	2,000	435,186	7,470	4 48
Havelock	206	499	115,680	3,200	.....	118,880	2,322	2 86
Lakefield	331	506	278,250	22,525	.....	300,775	3,910	3 62
Norwood	367	405	200,125	7,300	1,100	208,525	4,175	3 87
Total urban (1895	4,713	3,636	4,957,841	274,025	145,818	5,377,684	88,355	5 71
Total urban (1894	4,544	3,631	4,924,133	290,260	158,875	5,373,268	94,322	6 13
HALIBURTON:								
Anson and Hindon	86	12,815	32,998	1,375	.....	34,373	1,017	3 71
Cardiff	167	25,867	32,316	250	.....	32,566	1,262	2 12
Dysart	301	366,529	131,888	4,200	.....	136,088	5,250	5 31
Glamorgan	164	20,886	23,301	.....	.....	23,301	1,193	2 35
Lutterworth	134	20,589	35,942	.....	.....	35,942	1,403	3 12
Minden	324	35,969	84,315	1,600	500	86,415	2,754	2 31
Monmouth	142	21,554	26,819	.....	.....	26,819	1,115	2 66
Snowdon	277	34,539	70,468	1,150	.....	71,618	3,934	4 95
Stanhope and Sherbourne	196	24,063	32,068	100	.....	32,168	1,265	2 00
Total rural (1895	1,791	562,304	470,115	8,675	500	479,290	19,193	3 21
Total rural (1894	1,766	563,512	472,586	10,325	500	483,411	22,183	3 85

* Taken from return of 1894. † Separated from county for municipal purposes.

ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.	No. of rate-payers.	No. of acres as-sessed.	Assessed values.				Taxes imposed for all purposes.	
			Real property.	Per-sonal pro-perty.	Taxable income.	Total.	Total.	Per head.
			$	$	$	$	$	$ c.
HASTINGS:								
Bangor, Wicklow and McC.	172	24,429	24,640	1,425	.....	26,065	1,464	1 90
Carlow	140	18,375	52,550	.....	.....	52,550	1,910	3 60
Dungannon	192	33,023	49,086	.....	.....	49,086	1,940	2 63
Elzevir and Grimsthorpe	360	63,192	105,080	.....	.....	105,080	3,270	3 32
Faraday	296	44,578	57,785	1,300	.....	59,085	2,156	2 20
Hungerford	1,244	91,895	741,369	1,050	.....	742,419	11,347	2 51
Huntingdon	766	55,342	430,588	.....	.....	430,588	7,183	3 11
Limerick	141	43 364	54,782	.....	.....	54,782	1,055	2 02
Madoc	*551	67,625	491,802	.....	.....	491,802	10,525	4 16
Marmora and Lake	618	102,156	289,042	2,600	.....	291,642	6,886	3 50
Mayo	127	17,483	29,200	.....	.....	29,200	1,455	3 24
Monteagle and Herschel	442	53,896	74,899	.....	.....	74,899	3,065	2 01
Rawdon	1,105	66,517	1,194,020	.....	.....	1,194,020	12,748	3 77
Sidney	1,546	69,567	2,326,690	.....	6,500	2,333,190	18,408	4 30
Thurlow	1,673	53,443	2,064,800	.....	.....	2,064,800	19,249	3 98
Tudor and Cashel	219	59,678	65,269	.....	.....	65,269	2,601	3 36
Tyendinaga	1,186	75,070	1,426,756	2,525	600	1,429,881	17,308	4 59
Wollaston	205	50,627	61,415	.....	.....	61,415	1,812	2 62
Total rural 1895	10,983	990,260	9,539,773	8,900	7,100	9,555,773	124,382	3 50
Total rural 1894	10,999	997,256	9,557,186	8,450	5,805	9,571,441	130,712	3 70
Deseronto	732	533	652,735	37,100	6,800	696,635	16,023	5 41
†*Trenton*	1,478	1,800	1,183,938	31,475	9,000	1,224,413	26,833	6 41
Madoc	363	426	228,052	.....	.....	228,052	5,825	5 46
Stirling	286	720	166,729	3,475	400	170,604	3,471	4 35
Tweed	326	371	183,490	30,000	700	214,190	3,435	3 86
Total urban 1895	3,185	3,850	2,414,944	102,050	16,900	2,533,894	55,587	5 61
Total urban 1894	2,939	3,885	2,408,290	93,950	12,000	2,514,240	57,931	5 63
MUSKOKA:								
Brunel	255	40,675	94,093	.....	.....	94,093	1,781	2 46
Cardwell	178	30,147	76,787	2,264	.....	79,051	1,321	3 15
Chaffey	356	44,391	128,042	.....	.....	128,042	2,505	2 25
Draper	317	39,627	90,061	.....	5,620	95,681	2,463	2 76
McLean and Ridout	294	38,717	93,939	2,650	.....	96,589	1,968	2 63
Macaulay	279	35,786	97,467	.....	.....	97,467	2,723	3 81
Medora and Wood	557	56,782	211,573	.....	.....	211,573	3,186	3 16
Monck	295	27,636	153,109	565	.....	153,674	2,276	2 67
Morrison	236	21,981	74,155	1,650	.....	75,805	1,552	1 72
Muskoka	258	31,228	89,768	.....	.....	89,768	1,661	2 66
Oakley	120	23,541	35,639	.....	.....	35,639	908	2 56
Ryde	164	20,985	50,444	1,175	.....	51,619	1,277	2 30
Stephenson	280	42,283	120,543	17,100	.....	137,643	2,539	2 50
Stisted	332	42,188	93,764	650	.....	94,414	1,781	2 88
Watt	289	34,846	113,872	450	.....	114,322	2,066	2 40
Total rural 1895	4,210	530,813	1,523,256	26,504	5,620	1,555,380	30,007	2 63
Total rural 1894	4,021	524,782	1,452,542	31,104	.....	1,483,646	28,624	2 67
Bracebridge	578	524	242,841	37,625	5,350	285 816	8,550	4 55
Gravenhurst	531	481	257,995	8,755	.....	266,750	9,460	5 07
Huntsville	431	*450	192,454	25,225	1,275	218,954	5,474	3 62
Total urban 1895	1,540	1,455	693,290	71,605	6,625	771,520	23,484	4 47
Total urban 1894	2,426	1,604	638,389	53,180	6,723	698,292	20,649	4 07
PARRY SOUND:								
Armour	268	38,054	192,330	1,500	.....	193,830	2,047	2 18
Chapman	257	34,012	101,554	5,905	.....	107,459	1,004	1 64

* Taken from return of 1894.

† Separated from county for municipal purposes.

ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.		No. of rate-payers.	No. of acres assessed.	Assessed values.				Taxes imposed for all purposes.	
				Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.
				$	$	$	$	$	$ c.
PARRY SOUND.—*Con.*									
*Christie		140	15,220	60,933			60,933	1,009	3 04
Foley		167	28,995	54,507	2,115		56,622	984	2 00
Hagerman		147	17,306	47,612	1,750	500	49,862	1,335	2 60
Himsworth, N.		149	10,094	48,168	3,695		51,863	1,332	6 53
Himsworth, S.		384	44,792	185,076	9,584		194,660	3,045	2 23
Humphrey		248	28,274	106,974	4,581		110,555	1,503	2 75
Joly		117	19,766	41,910			41,910	761	2 85
McDougall		149	24,558	56,690			56,690	1,305	3 85
McKellar		202	26,931	74,140			74,140	1,848	3 14
McMurrich		254	38,218	119,393			119,393	1,978	2 85
Machar		291	34,724	89,626	1,000		90,626	2,164	2 43
Nipissing		171	28,328	93,815	1,400		95,215	1,393	2 56
Perry		397	41,751	181,129	7,525		188,654	2,500	1 99
Ryerson		224	38,110	123,971			123,971	1,852	2 90
Strong		†221	38,832	128,835			128,835	1,828	2 70
Total rural	1895	3,786	507,965	1,705,663	39,055	500	1,745,218	27,938	2 56
	1894	3,571	488,484	1,655,486	39,610		1,695,096	27,308	2 76
Parry Sound		616	†805	307,070	17,400	2,900	327,370	9,618	5 19
Burk's Falls		164	582	75,099	10,850	300	86,249	2,406	4 11
Sundridge		155	423	59,532	4,850		64,382	1,566	3 69
Total urban	1895	935	1,810	441,701	33,100	3,200	478,001	13,590	4 75
	1894	739	1,833	411,798	39,650	3,500	454,948	10,230	3 77
NIPISSING:									
Bonfield		294	31,600	67,810	200		68,010	1,962	1 53
*Caldwell		160	30,592	40,606			40,606	506	1 10
Calvin		132	23,343	33,890	1,117		35,007	923	1 88
Cameron		52	9,485	23,800			23,800	575	6 61
Ferris		283	34,753	53,077	300		53,377	1,644	3 21
McKim		195	13,086	41,270	49,545		90,815	3,300	5 28
Mattawan		68	11,118	34,446			34,446	555	2 40
Papineau		191	19,743	48,020			48,020	720	1 15
Springer		431	†28,911	65,771	7,270		73,041	4,001	3 29
Widdifield		207	37,134	49,815			49,815	896	2 15
Total rural	1895	2,013	239,765	458,505	58,432		516,937	15,082	2 54
	1894	1,858	214,164	444,888	57,500		502,388	14,028	2 49
Mattawa		441	†500	216,121	60,900	3,700	280,721	6,892	3 83
North Bay		698	500	413,840	12,650		426,490	10,656	4 92
Sudbury		407	2,479	249,702	55,000	800	305,502	10,057	7 14
Total urban	1895	1,546	3,479	879,663	128,550	4,500	1,012,713	27,605	5 13
	1894	1,436	3,606	695,646	131,350	6,100	833,096	21,681	3 90
MANITOULIN:									
Assiginack		292	35,096	131,533	3,800		135,333	2,065	1 99
Billings		147	24,819	63,819			63,819	835	2 54
Burpee		61	12,641	19,480			19,480	587	3 04
Carnarvon		163	24,940	61,172			61,172	1,390	2 27
Cockburn Island		81	10,803	20,635	7,430	300	28,065	871	5 62
Gordon		255	35,760	108,000			108,000	1,547	2 21
Howland		255	46,797	115,709	2,700		118,409	2,500	2 98
Sandfield		83	12,021	30,235			30,235	843	3 53
Tehkummah		148	19,690	51,125			51,125	908	2 33
Total rural	1895	1,485	221,487	601,308	13,930	300	615,628	11,365	2 57
	1894	1,436	221,528	587,000	18,485	1,100	606,585	14,076	3 18

*Organized in 1894. †Taken from return of 1894.

ASSESSMENT AND TAXATION.—*Continued.*

Municipalities.	No. of rate-payers.	No. of acres assessed.	Assessed values.				Taxes imposed for all purposes.	
			Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.
			$	$	$	$	$	$ c.
MANITOULIN.—*Con.*								
Gore Bay	137	817	87,175	13,600	.....	100,775	2,443	4 70
Little Current	152	400	75,000	10,000	.....	85,000	2,257	4 13
Total urban 1895	289	1,217	162,175	23,600	.....	185,775	4,700	4 41
Total urban 1894	299	1,485	157,500	40,725	.....	198,225	4,715	4 45
ALGOMA :								
Balfour	*120	16,192	50,285	.....	.....	50,285	1,518	3 16
†Drury, Denison and Graham	237	40,147	90,381	.....	.....	90,381	1,675	7 01
Hallam	170	13,803	85,837	13,400	.....	99,237	1,304	2 81
Hilton	117	25,967	41,405	.....	.....	41,405	1,290	4 30
Jocelyn	158	28,081	62,272	11,970	.....	74,242	2,081	5 27
Johnson and Tarbutt	153	32,954	113,381	2,675	.....	116,056	1,569	2 84
Laird	122	14,356	61,209	.....	.....	61,209	795	3 07
Macdonald and Meredith	108	16,910	47,936	.....	.....	47,936	1,040	2 52
Plummer additional	137	16 811	88,324	400	.....	88,724	1,281	2 35
Rayside	126	18,112	29,557	.....	.....	29,557	1,046	2 24
St. Joseph	256	28,591	94,730	2,600	.....	97,330	2,395	3 01
Salter, May and 116	226	34,945	85,940	2,429	.....	88,369	1,896	2 90
Sault Ste. Marie	392	47,019	226,214	.....	.....	226,214	4,784	9 57
Thessalon	163	17,840	49,285	.....	.....	49,285	1,417	3 06
Total rural 1895	2,485	351,728	1,126,756	33,474	.....	1,160,230	24,091	3 69
Total rural 1894	2,408	340,120	1,108,782	45,030	50	1,153,862	21,257	3 61
Sault Ste. Marie	994	2,100	911,954	32,800	13,400	958,154	19,428	7 79
Thessalon	*150	*728	101,460	20,700	.....	122,160	2,496	3 92
Total urban 1895	1,144	2,828	1,013,414	53,500	13,400	1,080,314	21,924	7 00
Total urban 1894	876	2,828	978,164	67,000	2,800	1,047,964	23,769	8 64
THUNDER BAY :								
Neebing	173	111,882	163,049	.....	.....	163,049	2,971	47 16
Oliver	196	28,974	82,519	400	.....	82,919	1,338	3 77
Shuniah	125	*96,843	156,591	.....	400	156,991	2,749	20 21
Total rural 1895	494	237,699	402,159	400	400	402,959	7,058	12 74
Total rural 1894	410	239,231	394,241	.....	800	395,041	7,217	12 15
Fort William	673	7,000	845,016	31,200	11,550	887,766	22,505	11 16
Port Arthur	831	12,500	1,247,175	91,800	35,400	1,374,375	35,631	11 86
Total urban 1895	1,504	19,500	2,092,191	123,000	46,950	2,262,141	58,136	11 58
Total urban 1894	1,922	19,500	2,267,603	140,900	47,650	2,456,153	57,910	11 69
RAINY RIVER :								
Alberton	203	*12,526	70,655	19,286	.....	89,941	1,332	5 35
Keewatin	183	*2,560	208,690	3,725	.....	212,415	2,344	3 79
Total rural 1895	386	15,086	279,345	23,011	.....	302,356	3,676	4 24
Total rural 1894	357	15,086	268,339	33,057	.....	301,396	3,188	3 72
Rat Portage (urban) 1895	1,131	*5,760	897,471	120,625	1,000	1,019,096	19,901	6 70
Rat Portage (urban) 1894	1,355	5,760	816,295	119,350	4,400	940,045	15,859	4 98

*Taken from return of 1894. †Organized in 1894.

ASSESSMENT AND TAXATION.

TABLE II. Detailed statement of the Cities, Towns separated from Counties, and other incorporated Towns of Ontario giving statistic of Assessment and Taxation, as in Table I., for the two years, 1894-95.

Cities and Towns.		No. of rate-payers.	No. of acres assessed.	Assessed values.				Taxes imposed for all purposes.	
				Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.
CITIES.				$	$	$	$	$	$ c.
Windsor: (Essex Co.)	1895	3,026	2,020	5,242,418	169,100	56,350	5,467,868	153,804	13 32
	1894	2,748	2,020	4,853,394	172,300	68,750	5,094,444	143,869	12 55
Chatham: (Kent Co.)	1895	1,890	1,650	3,281,090	160,450	83,350	3,524,890	67,133	7 44
	1894	1,875	1,650	3,262,804	153 250	78,450	3,494,504	70,565	8 10
St. Thomas: (Elgin Co.)	1895	3,297	1,600	3,771,579	255,450	225,750	4,252,779	88,376	8 37
	1894	3,215	1,600	3,682.358	272,335	234,714	4,189,407	91,083	8 52
London: (Middlesex Co.)	1895	8,303	4,089	12,922.194	1,414,900	845,825	15,182,919	337,845	9 81
	1894	8,400	4,100	12,668,375	1,475,850	773,700	14,917,925	295,849	8 85
Brantford: (Brant Co.)	1895	3,183	2,541	5,558,395	619,730	122,516	6,300,641	122,591	7 51
	1894	3,036	2,541	5,552,900	727,800	127,560	6,408,260	125,122	7 98
Stratford: Perth Co.)	1895	2,342	2,835	3,756,070	115,200	77,450	3,948,720	84,405	8 14
	1894	2,794	2,835	3,664,975	116,850	88,025	3,869,850	83,507	8 17
Guelph: (Wellington Co.)	1895	2,849	3,210	3,348,025	268,670	100,150	3,716,845	92,987	8 68
	1894	2,834	3,210	3,315,620	259,400	93,700	3,668,720	85,027	8 10
St. Catharines: (Lincoln Co.)	1895	3,483	3,000	3,667,775	548,350	56,150	4,272,275	91,402	9 47
	1894	3,254	3,000	3,684,025	544,400	61,350	4,289,775	79,479	8 26
Hamilton: Wentworth Co.)	1895	13,496	2,700	21,654,630	2,774,810	708,780	25,138,220	504,585	10 34
	1894	13,174	2,700	21,142,800	2,823,010	725,910	24,691,720	491,982	10 15
Toronto: (York Co.)	1895	54 471	9.638	133,547,442	8,177,666	4 703,114	146,428,222	3,063,770	17 32
	1894	52,391	9,638	137,846,388	8,199,581	4,720,770	150,766.739	3,129,247	17 95
Kingston: (Frontenac Co.)	1895	4,421	2,300	6,557,325	870,087	269,750	7,697,162	141,338	7 88
	1894	4,096	2,300	6,542,125	999,400	281,450	7,822,975	142.356	7 99
Ottawa: (Carleton Co.)	1895	11,000	3,365	18,085,500	1,250,300	414,525	19,750,325	443,600	8 93
	1894	10,140	3,366	17,703,635	1,329,925	366,375	19,399,935	437,480	9 16
Belleville: (Hastings Co.)	1895	3,400	1,600	3,687,096	227,400	95,700	4,010,196	85,758	8 31
	1894	3,350	1,600	3,659,483	249,200	106,937	4,015,620	82,909	8 20
TOWNS SEPARATED FROM COUNTIES.									
Walkerville: (Essex Co.)	1895	314	450	842,206	988,313	53,960	1,884,479	22,902	19 93
	1894	322	450	797,912	1,003,924	.....	1,801,836	21,421	18 51
Niagara Falls: (Welland Co.)	1895	1,394	1,082	1,969,310	75,150	5,600	2,050,060	37,655	10 08
	1894	1,322	1,082	1,923,745	59,200	13,000	1,995,945	34,245	9 46
St. Marys: (Perth Co.)	1895	1,072	2,642	1,085,365	85,900	24,850	1,196,115	21,519	6 59
	1894	1,014	2,672	1,090,285	75,225	23,010	1,188,520	21,697	6 63
Toronto Junction: (York Co.)	1895	2,369	1,226	4,398,882	171,225	.....	4,570.107	88,658	20 00
	1894	2,369	1,226	4,320,784	170,125	.....	4,490,909	88,386	20 65
*Cobourg: (Northumberland Co.)	1895	1,778	2,413	1,252,728	94,300	31,550	1,378,578	38,559	9 04
	1894	1,854	2,414	1,248,853	93,750	29,350	1,371,953	36,333	8 43
Brockville: (Leeds Co.)	1895	1,993	1,242	3 071,588	252,300	62,000	3,385,888	93,274	10 21
	1894	1,871	1,242	3,126,035	312 995	35,150	3,474,180	75,993	8 80

* Re-united with Northumberland and Durham in 1896.

ASSESSMENT AND TAXATION.—*Continued.*

Towns separated from Counties.		No. of rate-payers.	No. of acres assessed.	Assessed values.				Taxes imposed for all purposes.	
				Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.
				$	$	$	$		$ c.
Prescott: (Grenville Co.)	1895	820	1,182	816,725	28,850	9,200	854,775	17,403	6 18
	1894	832	1,182	813,150	29,950	12,800	855,900	17,347	5 90
Perth; (Lanark Co.)	1895	815	1,000	1,050,005	109,720	41,550	1,201,275	20,180	6 39
	1894	812	1,000	1,062,075	115,840	40,800	1,218,715	20,181	6 49
Peterborough: (Peterborough Co.)	1895	3,253	1,282	3,944,700	226,900	142,718	4,314,318	70,479	6 50
	1894	3,210	1,282	3,914,290	242,250	155,575	4,312,115	75,273	7 06
Trenton: (Hastings Co.)	1895	1,478	1,800	1,183,938	31,475	9,000	1,224,413	26,833	6 41
	1894	1,253	1,800	1,168,123	32,700	8,800	1,209,623	29,220	7 38
OTHER TOWNS.									
Amherstburg: (Essex Co.)	1895	957	417	446,950	27,200	7,000	481,150	13,939	6 39
	1894	1,094	416	452,880	27,650	5,800	486,330	13,144	6 31
Essex: (Essex Co.)	1895	794	700	365,625	13,750	5,700	385,075	11,938	5 80
	1894	668	700	366,173	14,900	6,600	387,673	12,331	5 70
Leamington: (Essex Co,)	1895	512	700	341,748	31,815	10,050	383,613	9,264	4 98
	1894	692	700	344,286	32,175	3,150	379,611	9,583	5 36
Sandwich: (Essex Co.)	1895	495	2,000	419,747	12,250	1,190	433,187	6,890	5 32
	1894	431	2,000	415,280	14,350	4,240	433,870	5,640	4 15
Blenheim: (Kent Co)	1895	575	488	384,760	35,010	7,910	427,680	8,786	5 15
	1894	537	488	371,340	33,510	7,420	412,270	8,703	5 48
Bothwell: (Kent Co.)	1895	238	2,250	172,587	22,250	400	195,237	3,638	4 26
	1894	226	2,250	169,845	23,150	400	193,395	3,501	4 15
Dresden: (Kent Co.)	1895	702	642	417,960	25,250	600	443,810	10,334	5 74
	1894	711	642	430,140	26,850	600	457,590	10,213	5 55
Ridgetown: (Kent Co.)	1895	572	662	590,650	49,915	3,575	644,140	13,708	6 32
	1894	567	662	596,884	47,600	2,250	646,734	13,446	6 30
Aylmer: (Elgin Co.)	1895	853	531	619,373	94,325	18,166	731,864	16,604	7 69
	1894	894	533	614,628	104,000	18,216	736,844	16,739	7 74
Simcoe: (Norfolk Co.	1895	1,026	797	809,025	60,550	42,285	911,860	20,757	7 84
	1894	1,063	797	810,450	61,335	39,100	910,885	20,669	7 87
Thorold: (Welland Co.)	1895	760	780	571,727	32,600	4,050	608,377	16,568	7 38
	1894	765	780	581,157	37,280	4,700	623,137	16,357	7 03
Welland: (Welland Co.)	1895	672	700	546,629	66,060	14,500	627,189	14,280	7 40
	1894	596	700	546,126	57,400	13,100	616,626	14,378	7 71
Forest: (Lambton Co.)	1895	568	950	311,305	20,125	3,500	334,930	8,303	5 33
	1894	558	950	315,785	20,625	4,500	340,910	8,196	5 27
Petrolea: (Lambton Co.)	1895	1,821	2,700	1,071,900	53,600	65,650	1,191,150	34,264	7 89
	1894	1,661	2,700	1,096,025	54,300	72,250	1,222,575	32,606	7 27
Sarnia: (Lambton Co.)	1895	1,761	1,450	1,818 110	152,672	107,435	2,078,217	54,957	8 74
	1894	1,714	1,450	1,788,015	155,900	108,813	2,052,728	55,541	8 51
Clinton: (Huron Co.)	1895	829	900	567,680	21,100	9,700	598,480	12,380	5 07
	1894	795	900	568,940	21,800	12,100	602,840	12,157	5 02
Goderich . (Huron Co.)	1895	1,160	1,000	970,685	53,625	35,170	1,059,480	25,185	6 81
	1894	1,146	1,000	965,000	56,175	35,120	1,056,295	24,357	6 70
Seaforth: (Huron Co.)	1895	593	550	551,248	74,375	8,400	634,023	15,317	6 35
	1894	597	550	571,135	59,350	11,000	641,485	16,150	6 62

ASSESSMENT AND TAXATION.—*Continued.*

Other towns.		No. of rate-payers.	No. of acres assessed.	Assessed value,				Taxes imposed for all purposes.	
				Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.
				$		$	$	$	$ c.
Wingham : (Huron Co)	1895	634	640	441,048	71,000	4,700	516,748	10,993	5 01
	1894	610	640	428,648	55,955	7,100	491,703	11,219	5 04
Kincardine : (Bruce Co.)	1895	722	1,100	594,005	36,750	14,150	644,905	15,477	5 78
	1894	760	1,100	606,535	34,400	14,100	655,035	16,376	5 73
Walkerton : (Bruce Co.)	1895	1,134	1,350	593,745	49,300	15,100	658,145	13,075	4 02
	1894	1,126	1,350	589,870	51,900	17,200	658,970	15,042	4 83
Wiarton : (Bruce Co.)	1895	618	746	361,400	29,600	4,000	395,000	8,464	3 88
	1894	536	690	343,150	20,075	2,400	365,625	8,044	3 70
Durham : (Grey Co.)	1895	436	1,100	253,220	39,250	5,500	297,970	7 036	5 70
	1894	376	1,100	247,140	37,700	3,600	288,440	6,325	5 17
Meaford : (Grey Co.)	1895	645	1,500	526,947	36,800	5,200	568,947	11,452	5 96
	1894	637	1,500	545,110	31,400	4,800	581,310	10,921	6 10
Owen Sound : (Grey Co.)	1895	2,251	6,120	2,375,108	136,777	51,915	2,563,800	70,165	9 40
	1894	2,420	6,120	2,411,810	131,050	32,525	2,575,385	70,358	9 59
Thornbury : (Grey Co)	1895	314	900	217,280	6,000	.....	223,280	3,615	4 18
	1894	305	900	214,060	7,850	.....	221,910	4,296	4 96
Alliston : (Simcoe Co.)	1895	418	500	307,795	11,625	4,400	323,820	7,046	3 69
	1894	412	500	306,946	14,645	4,350	325,941	6,828	3 55
Barrie : (Simcoe Co.)	1895	1,220	2,100	1,299,810	77,900	58,650	1,436,360	30,552	6 08
	1894	1,060	2,100	1,245,596	94,150	47,250	1,386,996	28,632	5 81
Collingwood : (Simcoe Co.)	1895	1,860	4,400	1,185,023	44,500	14,300	1,243,823	31,512	5 82
	1894	1,515	4,400	1,180,926	43,950	16,250	1,241,126	32,377	6 27
Midland : (Simcoe Co.)	1895	707	467	417,300	9,950	.....	427,250	9,740	5 27
	1894	648	464	436,710	7,750	.....	444,460	8,825	5 46
Orillia : (Simcoe Co.)	1895	1,406	1,600	1,158,634	77,650	17,100	1,253,384	27,664	5 48
	1894	1,361	1,600	1,155,284	82,950	20,600	1,258,934	26,599	5 46
Penetanguishene : (Simcoe Co.)	1895	631	1,716	406,520	20,550	1,150	428,220	11,468	4 76
	1894	761	1,717	376,800	18,250	1,150	396,200	11,837	5 10
Stayner : (Simcoe Co.)	1895	411	1,139	200,155	12,800	400	213,355	4,772	3 94
	1894	409	1,150	200,585	12,200	.....	212,785	4,762	4 06
Parkhill : (Middlesex Co.)	1895	527	561	286,805	26,200	2,850	315,855	7,786	4 96
	1894	569	525	277,369	30,700	2,000	310,069	9,052	5 83
Strathroy : (Middlesex Co.)	1895	939	2,200	868,770	52,840	16,476	938,086	20,747	6 79
	1894	960	2,200	875,886	49,210	16,200	941,296	20,701	6 86
Ingersoll : (Oxford Co)	1895	1,636	2,200	1,326,770	49,450	27,930	1,404,150	31,353	7 01
	1894	1,629	2,200	1,294,860	46,360	27,515	1,378,675	34,417	7 80
Tilsonburg : (Oxford Co.)	1895	873	2,000	649,360	62,350	2,400	714,110	14,937	6 93
	1894	843	2,000	638,390	48,950	3,000	690,340	13,436	6 07
Woodstock : (Oxford Co)	1895	2,315	1,525	2,523,100	127,400	65,750	2,722,250	60,239	6 85
	1894	2,280	1,525	2,535,500	130,150	63,000	2,718,650	62,135	6 99
Paris : (Brant Co.)	1895	1,143	680	949,576	100,050	15,710	1,065,375	19,844	6 51
	1894	1,014	680	954,732	106,200	15,415	1,076,347	19,096	6 23
Listowel : (Perth Co)	1895	1,081	1,700	669,980	60,800	7,300	758,080	15,459	5 76
	1894	1,079	1,700	670,470	69,650	9,150	749,270	15,199	5 95
Mitchell : (Perth Co.)	1895	664	1,200	591,020	70,275	6,850	668,145	13,513	6 13
	1894	641	1,200	586,548	71,570	7,900	866,018	12,132	5 52

ASSESSMENT AND TAXATION.—*Continued.*

Other towns.		No. of rate-payers.	No. of acres assessed.	Assessed value.				Taxes imposed for all purposes.	
				Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.
				$	$	$		$	$ c.
Harriston: (Wellington Co.)	1895	518	903	371,240	27,800	3,500	402,540	8,111	4 49
	1894	508	896	363,920	25,750	2,550	392,220	8,307	5 02
Mount Forest: (Wellington Co.)	1895	638	1,414	550,525	52,100	12,300	614,925	13,528	5 54
	1894	626	1,414	546,405	55,000	12,600	614 005	13,628	5 59
Palmerston: (Wellington Co.)	1895	708	919	357,060	43,500	4,650	405,210	9,761	4 92
	1894	698	919	336,260	32,450	5,100	373,810	9,770	4 96
Berlin: (Waterloo Co.)	1895	2,015	2,885	2,427,691	169,700	38,900	2,636,291	43,850	5 64
	1894	2,014	2,885	2,467,065	172,350	36,800	2,676,215	39,889	5 27
Galt: (Waterloo Co.)	1895	1,991	1,477	2,559,945	200,550	64,100	2,824,595	49,265	6 64
	1894	2,149	1,477	2,504,830	198 500	64 600	2,767,900	47,216	6 54
Waterloo: (Waterloo Co.)	1895	830	2,800	1,164 720	146,175	23,000	1,333,895	19,103	5 92
	1894	843	2,800	1,144,095	150,825	23,350	1,318,270	17,359	5 62
Orangeville: (Dufferin Co.)	1895	1,071	1,500	785,470	31,150	13,300	829,920	16,548	4 47
	1894	1,071	1,500	769,973	32 900	13,900	816,773	16,337	4 54
Niagara: (Lincoln Co.)	1895	500	591	469,720	16,975	600	487,295	9,384	7 18
	1894	413	599	462,630	16,075	2,000	480,705	8.412	7 40
Dundas: (Wentworth Co.)	1895	1,162	550	842,465	89,350	26,850	958,665	19,504	6 55
	1894	986	550	854,470	76,550	23,800	954,820	19,159	6 30
Milton: (Halton Co.)	1895	430	400	389,664	26,950	8,950	425,564	6 383	4 69
	1894	300	400	385,674	25,850	5,900	417,424	6,620	4 73
Oakville: (Halton Co.)	1895	655	1,300	473,932	12,900	2,400	489,282	11,336	6 71
	1894	629	1,300	484,465	26,100	2,400	512,965	9,506	5 95
Brampton: (Peel Co.)	1895	1,132	1,190	911,835	58,550	21,900	992,285	19,679	6 49
	1894	1,190	1,220	897,030	57,200	22,950	977,180	19,645	6 37
Aurora: (York Co.)	1895	819	1,100	442,607	13,150	550	456,307	9,817	5 68
	1894	857	1,100	450,693	16,150	550	467,398	8,824	4 83
Newmarket: (York Co.)	1895	718	674	477,037	34,125	7,600	518,762	12,685	6 26
	1894	761	674	468,172	36,575	6,500	511,247	12,392	5 95
North Toronto: (York Co.)	1895	1,400	2,500	1,280,606	.....	400	1,281,006	21,003	12 81
	1894	1,226	2,500	1,375,170	.....	.....	1,375,170	20,046	12 18
Oshawa: (Ontario Co.)	1895	1,505	2,400	1,013,270	52,650	20,900	1,086,820	23,682	5 96
	1894	1,436	2,400	1,031,440	56,200	21,300	1,108,940	24,107	5 97
Uxbridge: (Ontario Co.)	1895	738	500	527,725	43,600	12,325	583,650	11,820	6 05
	1894	412	503	534,350	46,425	7,100	587,875	13,183	6 78
Whitby: (Ontario Co.)	1895	899	3,800	811,620	47,600	18,150	877,370	22,624	8 75
	1894	868	3,800	828,658	50,200	19,400	898,258	21,087	8 19
Bowmanville: (Durham Co.)	1895	911	3,000	998,425	89,930	21,274	1,109,629	20,563	7 15
	1894	936	3,000	1,004,210	97,780	26,880	1,128,870	20,232	6 67
Port Hope: (Durham Co.)	1895	1,896	1,032	1,335,962	135,500	62,180	1,533,642	31,520	6 67
	1894	1,808	1,000	1,338,031	136,325	67,960	1,542,316	26,901	5 70
Picton: (Prince Ed. Co.)	1895	1,158	552	1,106,200	102,200	13,650	1,222,050	18 935	5 39
	1894	1,070	552	1,076,465	85,200	16,000	1,177,665	18,038	5 56
Napanee: (Lennox & Ad. Co.)	1895	1,005	372	885,595	28,760	27,100	941,455	25.825	8 46
	1894	1,019	372	888,710	29,260	26,200	944,170	24,713	8 26
Gananoque: (Leeds Co.)	1895	1,316	1,210	1,018,645	37,650	.....	1,056,295	21,323	5 89
	1894	1,336	1,215	1,011,070	39,200	.....	1,050,270	19,501	5 45

ASSESSMENT AND TAXATION.—*Continued.*

Other towns.		No. of rate payers.	No. of acres assessed.	Assessed value.				Taxes imposed for all purposes.	
				Real property.	Personal property.	Taxable income.	Total.	Tota	Per head.
				$	$	$	$	$	$ c.
Cornwall:	1895	1,511	740	1,521,980	51,450	26,700	1,600,130	34,116	5 63
(Stormont Co.)	1894	1,668	740	1,385,689	48,700	21,000	1,455,389	30,994	5 15
Arnprior:	1895	800	923	594,345	58,050	8,100	660,495	15,158	4 08
(Renfrew Co.)	1894	866	943	582,940	62,750	9,400	655,090	14,525	4 10
Pembroke:	1895	929	587	986,500	133,675	25,750	1,145,925	26,033	5 61
(Renfrew Co.)	1894	991	586	953,850	121,250	27,300	1,102,400	24,289	5 42
Renfrew:	1895	790	2,177	622,165	61,250	1,300	684,715	16,932	5 82
(Renfrew Co.)	1894	684	2,177	580,930	57,500	1,800	640,230	14,004	5 45
Almonte:	1895	795	700	729,289	91,750	8,750	819,789	14,765	5 02
(Lanark Co.)	1894	802	700	722,399	94,320	8,450	825,169	16,788	5 78
Carleton Place:	1895	1,184	550	749,585	60,450	8,100	818,085	16,517	3 83
(Lanark Co.)	1894	1,140	550	737,050	63,950	8,050	849,050	16,336	3 80
Smith's Falls:	1895	1,138	900	966,805	53,200	4,500	1,024,505	25,255	5 95
(Lanark Co.)	1894	1,127	900	954,360	56,000	4,500	1,014,860	20,297	4 81
Lindsay:	1895	1,763	1,550	1,504,170	329,715	39,450	1,871,335	47,964	7 05
(Victoria Co.)	1894	1,825	1,550	1,504,234	353,396	38,950	1,896,580	46,882	6 97
Deseronto:	1895	732	533	652,735	37,100	6,800	696,635	16,023	5 41
(Hastings Co.)	1894	729	533	664,140	27,675	1,500	693,315	15,946	4 33
Bracebridge:	1895	578	524	242,841	37,625	5,350	285,816	8,550	4 55
(Muskoka)	1894	533	500	222,690	32,050	5,950	260,690	7,168	4 06
Gravenhurst:	1895	531	481	257,995	8,755	...	266,750	9,460	5 07
(Muskoka)	1894	483	564	242,225	2,300	...	244,525	8,569	4 67
Parry Sound:	1895	616	805	307,070	17,400	2,900	327,370	9,618	5 19
(Parry Sound)	1894	487	805	289,924	19,800	3,200	312,924	7,440	4 16
Mattawa:	1895	441	500	216,121	60,900	3,700	280,721	6,892	3 83
(Nipissing)	1894	355	500	187,962	58,400	1,100	247,462	4,949	2 78
North Bay:	1895	698	500	413,840	12,650	....	426,490	10,656	4 92
(Nipissing)	1894	620	500	305,010	5,800	3,100	313,910	10,239	4 84
Sudbury:	1895	407	2,479	249,702	55,000	800	305,502	10,057	7 14
(Nipissing)	1894	461	2,606	202,674	67,150	1,900	271,724	6,493	4 58
Gore Bay:	1895	137	817	87,175	13,600	.....	100,775	2,443	4 76
(Manitoulin)	1894	139	1,085	73,775	32,000	....	105,775	3,155	8 79
Little Current:	1895	152	400	75,000	10,000	....	85,000	2,257	4 13
(Manitoulin)	1894	160	400	83,725	8,725		92,450	1,560	2 23
Sault Ste. Marie:	1895	904	2,100	944,954	32,800	13,400	958,154	19,428	7 79
(Algoma)	1894	726	2,100	881,164	49,000	2,800	932,964	21,534	10 11
Thessalon:	1895	150	728	101,460	20,700		122,160	2,496	3 92
(Algoma)	1894	150	728	97,000	18,000		115,000	2,235	3 60
Fort William:	1895	673	7,000	845,016	31,200	11,650	887,766	22,505	11 16
(Thunder Bay)	1894	1,108	7,000	875,933	28,500	8,350	912,783	19,695	9 43
Port Arthur:	1895	831	12,500	1,247,175	91,800	35,400	1,374,375	36,631	11 86
(Thunder Bay)	1894	814	12,500	1,391,670	112,400	39,300	1,543,370	38,215	13 38
Rat Portage:	1895	1,131	5,760	897,471	120,625	1,000	1,019,096	19,901	6 70
(Rainy River)	1894	1,350	5,760	816,295	119,350	4,400	940,045	15,839	4 98

ASSESSMENT AND TAXATION.

TABLE III. Summary statement by counties (being the total of townships, cities, towns and villages within limits of county) of items from assessment and collection rolls as given in Table I.

Counties.	No. of rate-payers.	No. of acres.	Assessed values.				Taxes imposed for all purposes.		
			Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.	Mills on $.
			$	$	$	$	$	$ c	
ESSEX:									
1895	15,308	437,946	19,261,386	1,296,918	144,366	20,702,670	426,006	8 01	20.6
1894	15,825	436,950	18,927,776	1,320,749	96,840	20,345,365	411,273	7 76	20.2
1893	15,099	437,539	18,958,920	1,320,620	87,000	20,366,540	413,957	7 95	20.3
1892	14,840	436,573	18,516,310	1,171,988	74,855	19,763,153	405,352	7 90	20.5
1891	15,189	433,500	18,140,862	1,212,603	70,294	19,423,759	357,096	6 98	18.4
1890	15,061	437,366	16,643,476	523,348	63,300	17,230,124	326,029	6 39	18.9
1889	14,648	437,044	14,927,965	274,697	59,800	15,262,462	317,077	6 30	20.8
1888	13,711	438,070	12,526,581	620,161	59,950	13,206,692	301,728	6 21	22 8
1887	13,783	437,740	11,820,454	547,407	69,260	12,437,121	268,406	5 66	21.6
1886	13,259	437,018	11,272,440	524,509	106,656	11,903,605	260,675	5 69	21.9
KENT:									
1895	16,098	572,835	23,125,231	364,850	108,225	23,598,306	356,099	6 91	15.1
1894	15,818	571,003	23,213,515	358,260	97,120	23,668,895	379,345	7 44	16.0
1893	15,659	572,909	23,301,499	349,275	95,766	23,746,540	378,908	7 53	16.0
1892	15,408	574,256	23,274,733	374,815	131,140	23,780,688	379,044	7 40	15.9
1891	15,828	574,299	23,297,095	365,300	135,333	23,797,728	380,726	7 29	16.0
1890	15,182	570,556	23,040,708	371,650	141,560	23,553,918	359,516	6 82	15.3
1889	15,366	577,473	22,751,162	408,270	93,335	23,252,767	341,705	6 62	14.7
1888	14,653	569,200	22,769,909	1,230,076	78,556	24,078,541	340,911	6 80	14.2
1887	14,686	569,200	22,513,728	1,275,948	119,680	23,909,356	333,157	6 73	13.9
1886	14,429	574,489	22,515,913	1,350,783	134,280	24,000,976	297,108	6 10	12.4
ELGIN:									
1895	14,349	441,098	17,413,394	435,440	256,396	18,105,230	263,981	6 27	14.0
1894	14,009	441,116	17,352,239	475,090	268,260	18,095,589	267,470	6 65	14.8
1893	13,903	440,320	17,235,498	437,650	263,941	17,937,089	263,179	6 72	14.7
1892	13,513	441,571	17,096,054	406,590	212,888	17,715,532	249,210	6 29	14.1
1891	13,547	440,784	17,034,080	393,925	215,215	17,643,220	231,548	5 81	13.1
1890	13,030	441,548	16,985,078	391,610	208,230	17,584,918	234,239	5 87	13.3
1889	13,304	439,987	16,900,138	390,705	204,885	17,495,728	237,645	5 86	13.6
1888	12,536	444,492	16,959,166	1,082,180	209,945	18,251,291	215,952	5 27	11.8
1887	12,568	439,883	16,783,153	1,088,950	231,810	18,103,913	213,528	5 24	11.8
1886	12,725	443,001	17,015,804	1,198,828	414,500	18,629,132	222,789	5 49	12.0
NORFOLK:									
1895	10,126	398,693	10,076,751	174,680	54,815	10,306,246	119,758	4 21	11.6
1894	9,827	398,351	10,071,655	180,955	57,620	10,310,230	120,804	4 39	11.7
1893	9,804	399,096	10,052,822	192,265	61,540	10,306,627	122,946	4 36	11.9
1892	9,762	396,786	10,119,207	210,402	68,390	10,397,999	121,139	4 27	11.7
1891	10,017	394,204	9,992,581	264,032	54,321	10,310,934	114,260	3 96	11.1
1890	9,708	399,327	9,995,387	244,690	55,014	10,295,091	112,660	3 83	10.9
1889	9,929	398,237	9,952,729	251,780	61,920	10,266,429	106,748	3 60	10.4
1888	9,336	396,740	9,907,397	710,818	62,422	10,680,637	111,294	3 83	10.4
1887	9,233	400,729	9,820,365	728,345	64,265	10,612,975	99,408	3 39	9 4
1886	9,012	400,112	9,956,559	757,202	50,369	10,764,130	99,039	3 34	9.2
HALDIMAND:									
1895	6,807	283,329	8,043,465	151,915	16,020	8,211,400	83,871	4 03	10.2
1894	6,669	282,949	8,055,924	155,490	14,750	8,226,164	86,824	4 20	10.6
1893	6,791	283,282	8,161,365	159,800	16,400	8,337,565	83,286	4 06	10.0
1892	6,635	282,600	8,153,846	165,225	16,900	8,335,971	84,366	4 08	10.1
1891	6,902	282,869	8,177,045	182,745	20,200	8,379,990	88,284	4 27	10.5
1890	6,757	282,864	8,082,628	179,721	20,250	8,282,599	89,014	4 25	10.7
1889	6,780	283,787	8,263,964	212,173	21,500	8,497,637	86,520	4 10	10.2
1888	6,612	284,127	7,891,726	659,938	15,150	8,566,814	86,022	4 08	10.0
1887	6,615	282,965	7,938,913	655,701	18,575	8,613,189	94,642	4 24	10.9
1886	6,744	283,300	7,899,804	669,833	12,500	8,582,137	85,666	3 89	10.0

ASSESSMENT AND TAXATION.—*Continued.*

Counties.	No. of rate-payers.	No. of acres.	Assessed values.				Taxes imposed for all purposes.		
			Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.	Mills on $
			$	$	$	$	$	$ c.	
WELLAND:									
1895	10,445	231,905	10,976,398	405,665	66,050	11,448,113	153,680	5 21	13.4
1894	10,236	232,756	11,038,710	393,497	77,266	11,509,473	147,992	5 06	12.9
1893	9,368	232,679	10,524,888	366,154	81,467	10,972,509	143,476	5 11	13 1
1892	9,384	232,158	10,239,981	361,147	73,151	10,674,279	137,113	4 91	12.8
1891	9,138	231,380	10,246,617	398,730	71,990	10,717,337	133,562	4 79	12.5
1890	9,094	231,075	10,126,036	393,800	71,780	10,591,616	135,259	4 88	12.8
1889	9,048	232,901	10,149,142	451,023	68,830	10,668,995	127,082	4 48	11.9
1888	8,946	231,705	9,976,283	826,312	85,230	10,887,825	128,808	4 41	11.8
1887	8,905	232,184	9,881,118	803,072	98,425	10,782,615	134,028	4 58	12.4
1886	8,964	231,891	9,751,555	826,303	115,358	10,693,216	112,779	3 94	10.5
LAMBTON:									
1895	17,193	670,023	18,861,182	353,227	182,310	19,396,719	330,162	6 29	17.0
1894	16,889	671,129	19,138,389	363,610	192,688	19,694,687	341,371	6 35	17.3
1893	16,785	670,749	19,190,109	397,105	211,584	19,798,798	342,366	6 37	17.3
1892	16,370	671,564	19,077,795	372,140	229,020	19,678,955	339,606	6 40	17.3
1891	16,037	671,024	19,214,036	389,746	138,197	19,741,999	322,812	6 07	16 4
1890	15,702	669,560	19,135,021	432,150	125,919	19,693,090	309,119	5 84	15.7
1889	15,623	671,045	19,398,418	440,572	122,174	19,961,164	311,919	6 19	15 6
1888	15,311	669,179	18,641,035	1,301,275	131,468	20,073,778	305,800	6 00	15 2
1887	15,279	677,182	18,611,740	1,202,339	135,710	19,949,789	283,405	5 65	14.2
1886	14,993	669,049	18,328,891	1,129,938	133,592	19,592,421	280,063	5 80	14 3
HURON:									
1895	17,876	806,095	30,005,258	426,300	73,370	30,504,928	272,884	4 42	8.9
1894	17,504	807,069	30,018,932	417,720	81,970	30,518,622	271,744	4 43	8 9
1893	17,506	807,101	30,198,007	427,785	91,600	30,717,392	270,686	4 48	8.8
1892	17,504	805,937	30,333,791	440,375	131,420	30,905,586	267,348	4 43	8.7
1891	17,302	802,412	30,383,338	456,085	137,880	30,977,303	260,966	4 26	8.4
1890	17,174	806,122	30,501,826	445,395	110,085	31,057,306	264,922	4 29	8 5
1889	17,286	806,788	30,721,006	454,610	111,985	31,287,601	258,165	4 05	8.3
1888	16,895	806,624	30,465,823	1,631,536	105,950	32,203,309	263,037	4 04	8.2
1887	17,132	805,936	30,219,105	1,647,962	120,795	31,987,862	274,201	4 15	8.6
1886	17,037	805,733	29,826,895	1,665,055	114,350	31,606,300	281,632	4 28	8 9
BRUCE:									
1895	16,776	863,292	20,808,825	464,530	50,450	21,323,805	214,665	3 68	10.1
1894	16,783	853,131	20,826,471	433,010	53,750	21,313,231	229,943	4 04	10.8
1893	16,144	848,071	20,903,023	443,185	54,675	21,400,883	238,777	4 22	11.2
1892	16,970	845,009	21,091,689	430,200	83,225	21,605,114	230,653	4 02	10.7
1891	16,058	826,294	21,228,073	433,275	71,975	21,733,273	220,072	3 80	10 1
1890	15,272	826,107	21,375,274	435,215	65,670	21,876,119	210,362	3 60	9 6
1889	14,785	819,245	21,571,609	418,630	68,910	22,059,149	236,437	4 03	10.7
1888	15,861	821,192	20,689,436	1,530,558	64,110	22,284,104	231,707	3 92	10.4
1887	15,740	831,914	20,006,659	1,502,939	72,515	21,582,113	230,530	3 90	10 7
1886	15,437	827,147	20,223,189	1,488,339	70,065	21,781,593	228,185	3 85	10 5
GREY:									
1895	20,406	1,073,427	19,913,461	340,932	67,690	20,292,083	260,659	3 94	12.8
1894	20,028	1,072,360	19,871,037	297,200	47,600	20,215,837	271,012	4 14	13 4
1893	19,502	1,073,476	19,883,114	300,145	42,565	20,225,824	254,871	3 96	12.6
1892	19,287	1,072,524	20,168,688	326,830	79,025	20,574,623	261,816	4 00	12.7
1891	19,165	1,069,014	20,267,490	336,510	82,000	20,680,000	256,121	3 86	12 4
1890	18,954	1,069,857	20,165,193	340,820	71,650	20,577,483	255,531	3 95	12.4
1889	18,518	1,069,756	20,361,060	374,345	70,620	20,806,025	252,356	3 85	12.1
1888	17,829	1,067,493	19,361,819	1,259,070	57,510	20,678,699	258,267	3 94	12.5
1887	17,798	1,068,304	19,264,581	1,263,537	64,210	20,592,278	244,447	3 72	11.8
1886	17,367	1,071,991	18,199,421	1,219,822	53,550	19,472,793	235,916	3 62	12.1
SIMCOE:									
1895	23,224	982,483	19,849,282	350,470	103,300	20,302,932	313,203	4 13	15.4
1894	22,627	978,407	19,674,362	374,225	100,300	20,149,087	310,834	4 14	15.1
1893	21,895	978,502	18,451,170	448,185	96,440	18,975,955	313,679	4 23	16.5
1892	21,610	977,948	18,518,173	427,100	143,410	19,088,683	313,076	4 26	16 4
1891	21,145	976,505	18,321,390	405,915	147,100	18,874,345	313,896	4 25	16.6
1890	20,749	968,847	18,326,243	433,245	136,550	18,887,438	308,594	4 16	16.3
1889	20,323	979,808	17,765,050	474,670	143,134	18,383,854	299,174	4 09	16 3
1888	19,586	967,873	17,610,758	941,800	80,750	18,618,372	295,475	4 04	15.9
1887	19,304	980,345	17,466,377	934,211	102,450	18,522,048	292,269	4 16	15.7
1886	18,864	965,134	16,948,293	955,443	104,700	17,908,436	297,655	4 25	16 5

ASSESSMENT AND TAXATION.—*Continued.*

Counties.	No. of rate-payers.	No. of acres.	Assessed values.				Taxes imposed for all purposes.		
			Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.	Mills on $.
			$	$	$	$	$	$ c.	
MIDDLESEX:									
1895	26,596	767,075	38,664,139	1,568,300	877,701	41,110,140	628,504	7 03	15.3
1894	26,959	767,655	38,487,988	1,639,895	805,260	40,933,143	595,603	6 80	14.6
1893	26,639	766,911	38,404,350	1,674,084	807,279	40,885,713	607,305	6 90	14.9
1892	26,593	766,777	38,292,365	1,721,224	1,002,850	41,016,439	624,029	7 11	15 2
1891	27,288	767,557	38,238,961	1,654,525	998,395	40,891,881	586,324	6 68	14.3
1890	26,708	765,942	38,139,819	1,781,760	973,014	40,894,593	628,518	7 16	15.4
1889	27,706	766,135	37,819,281	1,739,470	995,435	40,554,186	581,707	6 60	14.3
1888	27,030	766,265	36,217,174	2,307,415	1,015,334	39,539,923	598,518	6 79	15.1
1887	27,546	766,925	35,499,887	2,315,225	1,022,660	38,837,772	567,264	6 45	14.6
1886	27,058	767,116	34,700,180	2,252,250	1,163,496	38,115,926	558,555	6 28	14.7
OXFORD:									
1895	15,417	479,488	23,994,615	361,765	117,330	24,473,710	247,431	5 35	10.1
1894	15,200	479,692	24,000,853	358,475	114,010	24,473,338	256,536	5 54	10.5
1893	14,768	479,111	23,989,630	356,000	119,955	24,465,585	262,066	5 61	10.7
1892	15,120	479,715	23,911,330	308,675	148,262	24,368,267	260,425	5 51	10.7
1891	14,641	478,753	23,882,034	310,966	120,270	24,313,270	245,899	5 24	10.7
1890	14,632	478,383	23,836,610	323,100	108,235	24,267,945	237,508	5 00	9.8
1889	14,286	479,497	23,639,836	343,435	110,235	24,093,506	230,167	4 88	9.6
1888	13,586	478,058	23,329,891	1,550,973	123,675	25,004,539	229,514	4 95	9.2
1887	13,347	478,517	23,150,504	1,598 455	125,160	24 874,119	217,425	4 74	8.7
1886	13,168	478,768	22,871,104	1,561,735	115,370	24,548,209	216,297	4 83	8.8
BRANT:									
1895	9,198	219,101	15,864,492	930,304	155,876	16,950,672	205,553	6 02	12.1
1894	8,991	219,545	15,886,939	1,062,910	163,540	17,113,389	212,567	6 37	12.4
1893	8,771	219,080	15,893,296	1,090,620	161,504	17,145,420	209,344	6 34	12.2
1892	8,735	219,173	15,817,794	1,115,228	222,355	17,155,377	205,119	6 26	12.0
1891	8,912	218,775	15,682,523	1,090,361	233,945	17,006,829	189,161	5 53	11.1
1890	8,436	218,507	15,036,842	1,019,104	311,580	16,367,526	189,177	5 73	11.6
1889	8,471	217,873	14,800,382	934 596	210,126	15,945,104	170,875	5 18	10.7
1888	8,203	218,468	14,373,455	1,750,605	219,000	16,343 060	164,611	5 13	10.1
1887	8,125	219,630	14,127,356	1,708,646	198,435	16,034,437	157,972	4 84	9.9
1886	7,792	218,172	13,840,023	1,680,931	173,220	15,694,174	149,938	4 61	9.6
PERTH:									
1895	13,930	527,318	24,652,947	353,650	120,650	25,127,247	281,874	5 75	11.2
1894	14,051	527,063	24,479,824	354,970	130,885	24,965,679	282,463	5 79	11.3
1893	14,158	526,742	24 504,434	359,475	131,275	24,995,184	285,709	5 93	11.4
1892	14,098	526,574	24,721,162	302,368	170,655	25,194,185	279,113	5 81	11.1
1891	14,527	524,329	24,782,664	333,955	174,435	25,291,054	281,161	5 81	11.1
1890	13,647	526,487	24,718,116	337,700	177,325	25,233,141	277,100	5 58	11.0
1889	13,167	526,723	24,442,728	356,375	163,700	24,962,803	282,480	5 74	11.3
1888	12,880	526,847	23,958,356	1,040,675	168,610	25,167,641	261,351	5 41	10.4
1887	12,551	526,388	22,769,303	1,154,046	150,396	24,073,745	248,695	5 13	10.3
1886	12,089	526,288	22,528,471	999,567	99,521	23,627,559	248,992	5 07	10.5
WELLINGTON:									
1895	16,609	638,736	22,437,046	698,165	142,810	23 278,021	289,063	5 15	12.4
1894	16,150	637,588	22,381,152	670,305	139,460	23,190,917	279,784	5 00	12.1
1893	16,209	637,212	22,265,184	682,955	146,305	23,094,444	298,067	5 36	12.9
1892	16,050	637,697	21,629,631	693,435	172,960	22,496,026	276,260	5 03	12.3
1891	15,981	637,580	21,538,475	695,395	170,360	22,404,230	279,069	4 98	12.5
1890	15,514	638,107	21,716,413	720,040	127,790	22,564,243	272,741	4 80	12.1
1889	15,972	637,336	21,149,223	671,291	141,912	21,962,431	268,672	4 76	12.2
1888	15,683	637,672	20,559,346	1,680,373	147,453	22,387,172	279,110	4 83	12.5
1887	15,334	637,822	20,451,160	1,749,127	166,516	22,366,803	273,993	4 70	12.2
1886	15,392	637,942	19,730,607	1,593,985	152,641	21,477,233	278,033	4 71	12.9
WATERLOO:									
1895	12,510	316,741	21,590,069	725,565	154,399	22,470,033	228,102	4 62	10.2
1894	12,466	316,986	21,912,494	745,725	156,554	22,814,773	224,553	4 62	9.8
1893	12,180	317,732	21,903,393	734,575	164,964	22,802,932	218,222	4 56	9.6
1892	12,227	317,406	21,937,086	743,655	198,459	22,879,200	230,175	4 84	10.1
1891	12,440	317,392	22,018,776	767,395	200,626	22,986,797	210,856	4 36	9.2
1890	11,933	316,524	21,876,998	782,010	191,981	22,850,989	209,378	4 32	9.2
1889	11,799	316,012	18,092,955	746,655	178,386	19,017,996	205,191	4 27	10.8
1888	11,808	315,138	14,310,705	1,436,125	177,480	15,924,310	193,967	4 08	12.2
1887	11,542	313,656	12,554,020	1,284,468	174,641	14,013,129	186,402	4 05	13.3
1886	11,061	316,131	12,303,385	1,255,435	182,756	13,741,576	179,521	3 98	13.1

ASSESSMENT AND TAXATION.—*Continued.*

Counties.	No. of rate-payers.	No. of acres.	Assessed values.				Taxes imposed for all purposes.		
			Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.	Mills on $
			$	$	$	$	$	$ c	
DUFFERIN:									
1895	6,448	357,661	6,901,556	58,100	19,500	6,979,156	92,193	4 24	13.2
1894	6,226	358,772	6,892,518	58,260	20,100	6,970,878	94,462	4 41	13.6
1893	6,169	358,418	6,911,173	67,000	19,600	6,997,773	96,790	4 68	13.8
1892	6,044	359,085	7,148,248	69,775	20,300	7,238,323	95,114	4 88	13.1
1891	6,036	358,060	7,156,943	80,650	17,750	7,255,343	90,326	4 48	12.4
1890	5,675	356,871	5,859,080	61,025	18,900	5,939,005	96,070	4 57	16.2
1889	5,626	355,881	5,604,477	78,750	17,150	5,700,377	95,377	4 43	16.7
1888	5,429	358,459	5,354,279	290,950	18,050	5,663,279	90,983	4 26	16.1
1887	5,196	359,996	5,341,027	331,700	23,070	5,695,797	88,035	4 27	15.5
1886	5,094	357,669	5,110,235	285,800	16,200	5,412,235	87,403	4 46	16.1
LINCOLN:									
1895	10,520	196,970	11,544,947	702,998	68,276	12,316,221	190,612	6 50	15.5
1894	10,071	197,319	11,567,733	698,318	82,921	12,348,967	179,034	6 21	14.5
1893	10,077	196,847	11,539,889	702,108	96,510	12,338,507	193,822	6 80	15.7
1892	10,114	196,621	11,849,731	750 635	133,148	12,733,514	163,896	5 77	12.9
1891	10,298	196,291	11,660,214	782,513	138,162	12,580,889	172,859	6 00	13.7
1890	9,832	196,092	11,649,014	754,723	131,768	12,535,505	173,448	5 97	13.8
1889	9,489	196,102	11,616,949	808,082	138,076	12,563,107	188,237	6 31	15.0
1888	9,592	196,271	11,546,120	1,173,509	130,070	12,849,699	183,873	6 13	14.3
1887	9,350	196,695	11,505,317	1,212,111	152,101	12,864,529	176,045	5 87	13.7
1886	9,144	196,072	9,577,732	977,304	123,196	10,678,232	177,937	5 92	13.8
WENTWORTH:									
1895	22,697	275,869	34,837,726	2,924,930	754,295	38,516,951	599,983	7 97	15.6
1894	22,069	275,338	34,391,506	2,963,530	771,175	38,126,211	585,207	7 80	15.3
1893	21,460	275,337	34,461,421	3,011,560	827,910	38,300,891	606,949	8 17	15.8
1892	21,446	275,280	33,020,584	3,263,240	1,017,715	37,301,529	540,363	7 41	14.6
1891	21,081	276,824	32,428,369	3,391,130	980,636	36,800,074	540,046	7 19	14.7
1890	21,196	277,106	31,176,506	3,613,585	789,269	35,579,361	516,637	6 95	14.5
1889	20,891	276,288	29,548,126	3,869,770	754,810	34,112,706	508,594	6 84	14.9
1888	20,508	276,845	29,432,374	4,506,610	699,810	34,638,794	484,535	6 62	14.0
1887	20,111	276,046	28,129,939	4,368,425	868,570	33,366,934	477,500	6 64	14.3
1886	20,288	275,657	27,726,343	4,316,609	846,470	32,889,422	469,177	6 59	14.3
HALTON:									
1895	6,501	228,350	9,257,095	162,605	41,460	9,461,160	77,468	3 89	8.2
1894	6,069	228,307	9,279,072	176,544	30,240	9,485,856	76,609	3 86	8.0
1893	6,011	227,854	9,273,932	194,035	33,012	9,500,979	78,677	3 97	8.3
1892	6,200	227,992	9,422,877	145,493	40,506	9,608,876	82,308	4 05	8.6
1891	5,807	227,458	9,314,265	154,890	47,075	9,556,230	88,019	4 36	9.2
1890	5,689	227,117	9,295,472	154,290	34,420	9,484,182	89,616	4 34	9.4
1889	5,939	228,073	9,269,925	166,190	33,355	9,469,470	88,529	4 19	9.3
1888	5,427	227,045	8,973,915	676,094	35,688	9,685,687	86,845	4 15	9.0
1887	5,486	228,098	8,847,231	731,833	24,474	9,603,538	90,483	4 37	9.4
1886	5,551	226,588	8,675,347	738,475	21,543	9,435,365	86,131	4 09	9.1
PEEL:									
1895	7,649	291,565	10,541,345	103,850	27,700	10,672,895	90,324	4 16	8.5
1894	7,536	291,653	10,507,560	105,675	32,150	10,706,385	92,025	4 23	8.6
1893	7,410	290,420	10,048,358	106,445	32,930	10,809,720	96,679	4 43	8.9
1892	7,398	290,557	10,672,410	133,916	43,670	10,849,125	92,674	4 15	8.5
1891	7,241	291,433	10,612,880	143,670	47,795	10,794,345	96,046	4 33	8.9
1890	6,981	290,433	10,573,173	146,660	35,035	10,704,893	89,868	4 00	8.4
1889	7,157	289,893	10,496,489	150,175	33,200	10,677,864	90,171	3 96	8.4
1888	6,879	291,347	10,393,893	661,778	31,800	10,884,348	98,365	4 29	9.0
1887	7,209	291,899	10,174,390	648,205	26,404	10,844,169	100,011	4 27	9.2
1886	7,293	290,565	10,128,992	658,160	31,600	10,818,752	96,641	4 10	8 9
YORK:									
1895	79,862	553,618	165,518,434	8,507,986	4,744,764	178,767,184	3,429,028	14 68	19.2
1894	77,647	553,440	170,554,418	8,540,581	4,775,870	183,870,819	3,499,340	15 06	19.0
1893	78,798	555,650	172,245,044	8,694,290	4,795,618	185,734,922	3,688,811	16 41	19.9
1892	78,464	555,548	171,926,988	9,593,810	5,603,168	187,123,966	3,159,524	13 94	16.9
1891	76,182	553,749	168,011,454	9,297,440	5,467,692	182,776,586	3,350,056	14 80	18.3
1890	66,912	553,536	167,664,290	9,524,723	5,277,093	171,466,076	2,655,686	11 97	15.4
1889	61,603	553,307	132,784,875	9,127,640	4,805,417	146,717,882	2,181,903	10 21	14.9
1888	50,891	556,031	111,482,010	10,286,206	4,011,852	130,780,267	1,952,575	10 03	15.0
1887	50,930	553,104	98,961,481	9,841,960	5,078,185	114,134,644	1,788,788	9 30	15.2
1886	52,048	553,475	88,431,504	8,726,744	4,388,325	101,546,573	1,546,614	8 80	15.2

ASSESSMENT AND TAXATION.—*Continued.*

Counties.	No. of rate-payers.	No. of acres.	Assessed values.				Taxes imposed for all purposes.		
			Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.	Mills on $
			$	$	$	$	$	$ c.	
ONTARIO :									
1895	14 500	508 236	17,914,528	391.135	65,125	18,370,788	186,061	4 52	10.1
1894	14,334	508 547	18 013,227	433,355	65 700	18.512,282	191,346	4 69	10.3
1893	14 483	510,134	18,195,065	433,425	76,550	18.705,040	187,286	4 58	10.0
1892	14.256	511,253	18.481.497	424 960	88,850	18.995,307	187,861	4 51	9.9
1891	13,953	509 707	18 7 4 237	419,420	83.490	19.227,147	195 392	4 55	10.2
1890	13 591	506,864	18 833.774	439 915	77 735	19,351,424	189.186	4 40	9.8
1889	13,878	509.123	18 982 262	437,270	91,620	19 511,152	183,202	4 21	9.4
1888	13,338	509 820	18,819 647	1,168.934	74 808	20,063,389	193,733	4 49	9.7
1887	13,454	507,1 8	18,871.539	1,196 715	73.830	20,142,084	185.783	4 13	9.2
1886	13,325	508,639	18,847,878	1,227,740	80,285	20,155,903	174,427	3 81	8.6
DURHAM :									
1895	10,130	376 685	12 808.287	283,205	96 936	13,188,428	126,633	4 27	9.6
1894	10 076	377,058	12,866,756	294,980	107,040	13,268 776	126,670	4 27	9.5
1893	10,095	377.2 3	12,951.554	300.325	121.270	13.376 149	130 708	4 33	9.8
1892	9.6 4	375 668	12,977 770	272 355	122,075	13.372 200	132.325	4 33	9.9
1891	9,877	374 590	13 095 560	288 780	114 620	13,498,960	135,367	4 38	10.0
1890	9.601	375 075	13 265 815	308 785	116.994	13 691.594	140,886	4 54	10.3
1889	9 975	374 732	13.227 873	329.705	119,303	13,676,881	130.565	4 11	9.5
1888	9,055	375,175	13,102,150	794.180	118,572	14.014.902	130.711	4 05	9.3
1887	9,126	375 152	13.123,985	839.560	160,694	14 124 239	130.567	3 91	9.2
1886	9,061	376,806	13,142,491	928,349	177,039	14,247,879	130,879	3 99	9.1
NORTHUMBERLAND :									
1895	12,319	442,983	13.242.196	205,680	62 395	13,510 271	152.137	4 37	11.3
1894	12 129	441,496	13,237,108	279,880	59 670	13,576.658	150.201	4 32	11.1
1893	11.833	444 117	13,342,130	294 650	67,300	13.704 080	145,441	4 12	10 6
1892	11.987	442,393	13.533.132	305,720	97,920	13,936,772	148.345	4 21	10 6
1891	12 055	441,097	13,483.789	365,400	103,850	13 953 039	150 626	4 18	10 8
1890	10 929	440 938	13,311,207	261,095	88,050	13.660,352	144,741	4 02	10.6
1889	11,121	443,763	13.568 825	273,755	80,705	13,723,285	142 986	3 96	10.4
1888	10 849	439,781	13,926 842	850.547	102.000	14,179,389	137,005	3 77	9.7
1887	10,973	439 082	13,229.253	901.862	103,525	14.234.640	142,166	3 91	10.0
1886	10,616	439,483	13,105,809	938,791	106,055	14,150,655	144,384	3 89	10.2
PRINCE EDWARD :									
1895	6,551	232,430	6.629,704	164.232	20,865	6 814.801	68,441	3 88	10.0
1894	6,446	233,074	6,636.154	151.495	23,130	6,810,779	68,614	3 91	10.1
1893	6,311	231.690	6.661 883	158 920	31.870	6.852,673	71,131	4 19	10.4
1892	6 369	230,590	6 6 8,505	166,520	42.015	6 897 040	71,886	4 27	10.4
1891	6 349	232,376	6,685,639	165 460	37.700	6,888 739	75.117	4 36	10.9
1890	6,212	233,733	6,694,445	185 805	11 700	6 871,950	69 964	4 06	10 2
1889	6 213	233 408	6,715,724	267.293	18.140	7.001,157	70,668	4 09	10.1
1888	6.297	234,850	6,997.210	413.240	21 990	7,433,440	67.225	3 85	9 0
1887	6 123	235,958	7.000 930	413.350	26 350	7.440 630	67,181	3 81	9.0
1886	5 979	234,743	6,968,848	413,108	32,956	7,414,912	75,755	4 17	10.2
LENNOX & ADDITON :									
1895	8,076	430.542	7,710,070	105,040	41,600	7,856 710	111,496	5 17	14.2
1894	7.897	436 725	7.725,380	93.725	41,175	7 860,280	109 825	5 16	14.0
1893	7.928	433.958	7,537,371	90,035	47,875	7.675,281	103,158	4 91	13.4
1892	7.916	435,148	7.591,586	88,626	49,871	7.730 083	107,382	4 79	13.9
1891	7,803	427,226	7 634 580	71,695	44.260	7 750,485	109.636	4 79	14.1
1890	7,485	420,651	7.602 099	100 507	38 330	7,740 936	98,407	4 43	12.7
1889	7.499	418,703	7.760,966	104 361	42 275	7 927,605	102,763	4 58	13 0
1888	7 632	412,661	7 895 110	360 945	45 216	8.301,271	98,163	4 52	11.9
1887	7 552	411,720	7.625.353	389 095	49 508	8,063,956	97,740	4 25	12.1
1886	7,637	403,772	7,694 842	395,088	48,816	8,138,746	97,436	4 13	12.0
FRONTENAC :									
1895	11.322	683.370	11,509 688	911,142	283,050	12.703 880	226,919	5 66	17 9
1894	10.975	675,565	11,502 659	1,036.520	297 425	12 836 604	230,111	5 74	17.9
1893	11 353	675,424	11,512.518	1,043,505	308 875	12,864 928	232.667	5 93	18.1
1892	10.859	68 789	11 517.766	1,085.885	417,210	13.020,861	226,574	5 70	17.4
1891	10 800	676 665	11.408.645	1,094.245	470 190	12.973 080	220.285	5 44	17 0
1890	10.528	680 861	11,316.517	1 1 6 888	473 740	12,907,125	222 871	5 43	17.3
1889	10 104	681.117	11.024.245	1,11 639	423,695	12 565 579	211,288	5 2	16.8
1888	10.026	66 971	10 663,0 6	1.486,379	435 199	12.584,674	190.305	4 80	15.1
1887	11 945	658.731	10.274,276	1,498 560	476 940	12 2 9 776	184,780	4 76	15.1
1886	12,817	669,478	10,084,764	1,547,666	419,350	12,051,780	182,669	4 69	15.1

ASSESSMENT AND TAXATION.—*Continued.*

Counties.	No. of rate-payers.	No. of acres.	Assessed values.				Taxes imposed for all purposes.		
			Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.	Mills on $.
			$	$	$	$	$	$ c.	
LEEDS:									
1895	12,034	473,712	11,411,714	351,855	77,910	11,841,479	208,235	5 88	17.6
1894	11,738	473,465	11,480,465	415,565	45,810	11,941,840	183,605	5 19	15.4
1893	11,334	476,416	11,600,123	409,175	40,180	12,049,478	181,634	5 22	16.1
1892	11,541	476,406	10,481,867	429,005	126,478	11,037,350	181,221	5 18	16.4
1891	11,399	480,104	10,492,037	451,125	132,508	11,075,670	177,209	4 95	16.0
1890	11,412	472,128	10,417,064	442,795	136,518	10,996 377	181,863	5 04	16.5
1889	11,335	474,486	10,226,164	525,549	137,790	10,889,503	162,880	4 39	15.0
1888	10,954	474,026	10,107,373	841,863	108,627	11,057,863	148,967	4 09	13.5
1887	10,814	471,542	9,878,961	829,888	98,500	10,807,359	136,767	3 82	12.7
1886	10,752	469,292	9,849,973	789,387	82,462	10,721,822	137,783	3 91	12.9
GRENVILLE:									
1895	6,127	274,176	5,964,048	105,550	35,075	6,104,673	73,713	3 87	12.1
1894	6,125	273,786	5,977,412	102,500	36,000	6,115,967	72,802	3 77	11.9
1893	6,126	275,946	6,003,747	105,300	39,480	6,153,527	70,873	3 66	11.5
1892	6,236	274,148	5,994,217	103,250	41,425	6,138,892	67,806	3 43	11.0
1891	6,124	274,335	5 334,372	105,205	40,150	5,479 727	67,518	3 47	12.3
1890	5,980	274 992	5,234,476	81,600	41,500	5,357,576	65,755	3 34	12.3
1849	6,377	275,316	5,098,775	82,150	30,800	5,211,725	65,717	3 30	12.6
1888	6 092	275,323	4,966 235	424,787	27,918	5,418,940	61 688	3 04	11.4
1887	6 029	274,828	4,771,820	431,325	28,468	5,231 613	60,297	3 03	11.5
1886	5,905	274,671	4,849,804	467,454	32,118	5,349,376	60,188	2 98	11.3
DUNDAS:									
1895	5,817	239,811	7,001,455	119,800	41,510	7,162,765	78,889	4 35	11.0
1894	5,627	239 973	7,070,050	113,450	45,375	7,228,875	77,327	4 27	10 7
1893	5,603	239,331	7,025,530	133,225	40,100	7,198,855	76,094	4 11	10.6
1892	5,548	240,697	7,037,600	148,825	43,150	7,229,575	74,592	3 98	10.3
1891	5,626	239,305	6,833,270	153,400	44,625	7,031,295	73,247	3 91	10.4
1890	5,573	239,924	6 833,105	172,320	49,300	7,054,725	64,032	3 41	9.1
1889	5,474	239,096	6,868,307	176,850	52,250	7,097,407	73,087	3 95	10 3
1888	5,257	239,922	6,563,893	510,041	46 927	7,120 861	70,772	3 80	9.9
1887	5,121	239,229	5,925,438	493,915	28,025	6,447,378	60,984	3 29	9.5
1886	4,921	239,287	5,816,235	450,425	29,750	6,296,410	57,195	3 10	9.1
STORMONT:									
1895	6,275	250,976	5,088,276	85,750	33,150	5,207,176	80,417	3 48	15.4
1894	6 331	251,758	4,907,661	78,535	28,250	5,014,446	75,425	3 25	15.0
1893	6 329	251,668	4,794,280	85,575	28,080	4,907,935	77,495	3 38	15.8
1892	6,246	251,348	4,764 944	95,620	32,530	4,893,094	76,513	3 31	15.6
1891	6,151	254,262	4,783,671	85,700	36,280	4,910,651	74,474	3 16	15.2
1890	6 220	252 315	4,834,473	83,825	27,450	4,945,648	74,846	3 17	15.1
1889	6,151	248 040	4,797,148	84,340	34,300	4,915,788	79,401	3 44	16 2
1888	5,785	250 794	4,703,615	270,880	37,580	5,012,075	74,771	3 07	14.9
1887	5,716	248 490	4,486,530	313,705	34,680	4,834,916	67,252	2 97	13.9
1886	5,666	248,739	4,455,286	327,963	44,940	4,827,189	64,092	2 86	13.3
GLENGARRY:									
1895	5,057	284,094	4,108 868	43,875	2,520	4,155,263	54 860	2 73	13.2
1894	4,891	286 754	4,106,743	43,460	22,140	4,172 343	54,216	2 85	13.0
1893	4,844	280 985	4,112,619	50,550	6,920	4,170,089	48,678	2 45	11.7
1892	4,786	288 404	4,207,350	50,780	7,710	4,265,840	49,822	2 55	11.7
1891	4,832	284,394	4,219 906	56,975	2,780	4,279 661	48,227	2 40	11 3
1890	4,563	287,827	4 [illegible]	61,004	1,850	4,285 843	54,139	2 73	12.6
1889	4,834	283,130	4,248,819	100,780	...	4,348 599	48,896	2 40	11 2
1888	4,649	286,689	4,124,293	310,648	4,700	4 442,641	48,554	2 49	10 9
1887	4,[illegible]	290,37[illegible]	3,961,412	292,961	2,700	4,257,072	50,[illegible]	2 61	11 8
1886	4,613	284,321	4,068 289	339,421	3,700	4,411,401	45,764	2 52	10.4
PRESCOTT:									
1895	5,116	296,061	2,767,486	39 745	6,000	2,811,231	57,351	2 [illegible]	20 4
1894	5,185	295,040	2,704,496	32,805	7,600	2,814,901	54,971	2 44	19 4
1893	5,202	297,108	2,789,196	36,040	5,700	2,831,526	53,242	2 38	18 8
1892	5,148	295,165	2,787,030	35,940	8,400	2,831,370	51,843	2 40	18 3
1891	5,040	294,041	2,780,517	36,440	6,300	2,823,457	49,971	2 42	17 7
1890	5,198	294,881	2,840,511	57,895	6,000	2,884,406	49,299	2 36	17 1
1889	4,943	295,165	2,741,360	72,550	6,300	2,820,210	51,925	2 42	18 2
1888	4,796	294,174	2,740,579	178,250	7,200	2,926,031	48,980	2 40	16 7
1887	4,829	293,470	2,717,782	192,095	16,700	2,915,577	49,574	2 47	17.0
1886	4,954	292,977	2,858,341	132,640	12,800	3,013,881	46,110	2 20	15 1

ASSESSMENT AND TAXATION.—*Continued.*

Counties.	No. of rate-payers.	No. of acres.	Assessed values.				Taxes imposed for all purposes.		
			Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.	Mills on $.
			$	$	$	$	$	$ c.	
Russell:									
1895	4,125	252,987	1,921,487	14,675	200	1,936,362	39,885	2 49	20.6
1894	3,933	253,839	1,933,054	34,900	.....	1,967,954	37,664	2 42	19.1
1893	3,743	255,194	1,961,207	19,850	815	1,981,872	37,182	2 46	18.8
1892	4,040	254,260	1,930,232	12,175	.....	1,942,407	36,588	2 43	18.8
1891	4,237	254,399	1,902,725	11,375	.....	1,914,100	38,220	2 47	20.0
1890	3,847	253,575	1,948,785	12,825	.....	1,961,610	36,100	2 19	18.4
1889	3,646	252,299	1,906,879	10,680	.....	1,917,559	36,092	2 27	18.8
1888	3,489	254,405	1,892,301	144,294	900	2,037,495	33,388	2 12	16.4
1887	3,179	253,788	1,638,109	135,073	600	1,773,782	34,368	2 29	19 4
1886	3,047	250,327	1,679,591	164,593	.....	1,844,184	31,019	2 07	16.8
Carleton:									
1895	20,276	570,561	27,320,281	1,275,700	414,525	29,010,506	548.902	6 85	18.9
1894	19,199	571,586	26,716,206	1,356,675	566,575	28,439,456	538,962	6 92	19.0
1893	18,715	569,197	26,040,191	1,403,545	95,850	27,539,586	512,591	6 77	18.6
1892	18,500	568,522	25,623,046	1,419,020	140,850	27,182,916	492,658	6 63	18.1
1891	19,782	566,854	24,928,715	1,446,825	147,900	26,523,440	484,615	6 61	18.3
1890	18,817	566,814	24,398,425	1,463,575	154,650	26,016,650	460,128	6 30	17.7
1889	19,093	567,534	23,349,432	1,200,200	278,075	24,827,707	449,658	6 07	18.1
1888	18,473	572,578	21,795,438	1,847,042	257,300	23,899,780	516,232	6 96	21.6
1887	17,984	569,412	19,650,704	1,692,851	350,025	21,693,580	359,112	5 13	16 6
1886	17,689	566,897	19,300,834	1,638,414	345,725	21,284,973	392,717	5 73	18.5
Renfrew:									
1895	10,405	940,479	4,718,673	281,185	35,900	5,035,758	130,773	2 91	26.0
1894	10,249	939,056	4,632,443	272,190	50,820	4,955,453	125,454	2 88	25 3
1893	9,640	930,371	4,504,352	266,276	49,152	4,819,780	117,008	2 79	24.3
1892	9,505	913,599	4,404,248	284,321	50,350	4,738,919	112,400	2 71	23.7
1891	9,589	919,386	4,405,004	275,513	38,900	4,719,417	109,216	2 62	23.1
1890	9,234	898,298	4,283,188	287,086	41,650	4,611,924	105,235	2 55	22.8
1889	9,307	904,600	4,255,348	305,636	42,700	4,603,684	104,541	2 55	22.7
1888	9,090	888,816	4,125,672	709,826	38,825	4,874,323	99,859	2 50	20.5
1887	8,818	876,040	4,006,269	699,827	63,600	4,769,696	97,787	2 58	20.5
1886	8,506	864,884	3,859,809	696,895	62,450	4,619,154	92,278	2 45	20.0
Lanark:									
1895	10,130	676,476	8,476,660	505,201	65,480	9,047,341	141,114	3 96	15.6
1894	9,917	679,513	8,477,814	520,558	64,080	9,062,422	136,899	3 91	15.1
1893	9,800	676,791	8,227,064	519,131	71,830	8,818,025	129,393	3 71	14.7
1892	9,934	673,820	8,228,165	483,503	68,075	8,779,543	134,294	3 88	15.3
1891	9,871	676,049	8,218,283	436,695	75,150	8,730,128	128,866	3 65	14.8
1890	9,761	675,100	8,077,409	439,473	72,275	8,589,157	125,372	3 62	14.6
1889	9,764	674,223	8,000,064	426,145	65,775	8,491,984	121,690	3 40	14.3
1888	9,790	667,646	7,717,456	1,035,533	68,850	8,821,839	118,847	3 29	13 5
1887	9,674	673,159	7,573,245	1,021,039	79,925	8,674,209	120,910	3 34	13.9
1886	9,214	666,200	7,387,072	1,012,425	79,400	8,478,897	114,107	3 34	13.5
Victoria:									
1895	9,379	588,657	9,630,819	366,905	41,500	10,039,224	148,045	4 95	14.7
1894	9,470	588,908	9,664,898	385,336	40,725	10,090,959	148,571	5 01	14.7
1893	9,510	588,003	9,848,546	220,565	45,775	10,114,686	149,427	5 07	14.8
1892	9,474	586,004	9,789,584	157,000	93,790	10,040,374	148,661	5 02	14.8
1891	9,327	574,952	9,796,581	202,330	61,800	10,060,711	146,482	4 86	14.6
1890	8,958	574,049	9,751,654	197,285	53,780	10,002,719	140,795	4 60	14.1
1889	8,936	571,627	9,794,773	222,910	40,295	10,057,978	140,845	4 68	14.0
1888	8,377	572,409	9,586,091	703,402	55,960	10,345,453	144,596	4 84	14.0
1887	8,296	571,188	9,374,444	657,080	49,750	10,081,274	145,800	4 93	14.5
1886	8,307	567,102	9,439,143	615,640	47,719	10,102,502	149,033	4 90	14.8
Peterborough:									
1895	11,026	562,250	12,252,392	283,077	146,818	12,682,287	153,960	4 52	12.1
1894	10,878	555,443	12,256,466	299,460	160,375	12,716,301	160,228	4 75	12.6
1893	10,281	554,214	12,185,401	295,475	169,595	12,650,471	159,371	4 78	12.6
1892	9,880	546,516	12,140,245	304,950	215,175	12,660,370	156,411	4 76	12.4
1891	9,684	539,901	12,032,919	311,700	226,655	12,571,274	148,049	4 57	11.8
1890	9,483	544,183	11,851,560	313,165	267,050	12,431,575	140,507	4 45	11.3
1889	9,238	549,565	11,650,335	322,260	209,000	12,081,595	132,739	4 25	11.0
1888	8,659	544,519	11,286,552	931,623	208,250	12,526,425	123,794	3 98	9 9
1887	8,622	539,393	11,264,072	947,274	228,200	12,439,546	125,416	4 07	10.1
1886	8,217	532,856	11,046,059	976,294	233,840	12,256,193	131,344	4 31	10.7

ASSESSMENT AND TAXATION.—*Continued.*

Counties.	No. of rate-payers.	No. of acres.	Assessed values.				Taxes imposed for all purposes.		
			Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.	Mills on $
			$	$	$	$	$	$ c	
Haliburton:									
1895	1,791	562,504	470,115	8,675	500	479,290	19,193	3 21	40.0
1894	1,766	563,512	472,586	10,325	500	483,411	22,183	3 85	45.9
1893	1,616	565,918	464,956	13,850	500	479,306	22,349	3 91	46.6
1892	1,612	563,025	466,789	13,550	200	483,539	22,317	4 07	46.2
1891	1,709	563,158	479,332	11,466	200	490,998	20,747	3 60	42.3
1890	1,635	562,035	460,363	13,550	500	474,413	20,581	3 63	43.4
1889	1,639	557,193	474,908	15,120	500	490,548	20,708	3 43	42 2
1888	1,616	561,684	417,009	28,886	300	446,195	20,983	3 64	47.0
1887	1,526	556,445	434,391	29,118	400	463,909	20,364	3 65	43.9
1886	1,498	560,004	474,909	31,622	650	507,181	20,641	3 83	40 6
Hastings:									
1895	17,568	995,710	15,641,813	338,350	119,700	16,099,863	265,727	4 76	16.5
1894	17,288	1,002,741	15,624,959	351,600	124,742	16,101,301	271,552	4 87	16.9
1893	16,551	1,011,015	15,828,883	311,295	128,750	16,268,928	271,498	4 97	16.7
1892	16,032	985,419	15,777,475	269,450	129,125	16,176,050	270,980	4 89	16.8
1891	16,065	986,362	15,854,055	268,205	112,350	16,234,610	272,267	4 96	16 8
1890	15,988	980,555	15,689,778	236,430	111,125	16,037,333	269,214	4 93	16 8
1889	15,828	989,928	15,739,876	267,350	103,550	16,110,776	263,647	4 86	16 4
1888	15,641	965,868	14,714,622	723,441	102,400	15,540,463	260,595	4 79	16 8
1887	15,526	964,780	14,346,444	710,748	116,386	15,173,578	243,546	4 46	16.1
1886	15,039	948,172	14,193,671	686,093	128,250	15,008,014	242,258	4 66	16.1
Muskoka:									
1895	5,750	532,268	2,216,546	98,109	12,245	2,326,960	53,491	3 21	23.0
1894	5,447	526,386	2,090,931	84,284	6,723	2,181,938	49,273	3 12	22.6
1893	5,245	524,869	2,007,921	91,490	6,850	2,106,261	47,321	3 08	22 5
1892	4,778	518,677	1,967,339	82,440	9,000	2,058,779	47,094	3 13	22 9
1891	4,802	515,483	1,935,799	94,240	6,400	2,036,439	45,459	3 12	22.3
1890	4,686	516,232	1,915,519	75,259	7,000	1,997,778	42,779	2 91	21.4
1889	4,621	515,848	1,844,747	78,704	8,850	1,932,301	41,597	2 89	21 5
1888	4,382	509,912	1,759,708	238,657	7,340	2,005,705	41,758	2 98	20 8
1887	4,380	514,131	1,590,186	270,292	8,100	1,868,578	40,092	2 94	21.5
1886	4,295	510,878	1,509,300	262,640	7,575	1,779,515	36,764	2 70	20.7
Parry Sound:									
1895	4,721	509,775	2,147,364	72,155	3,700	2,223,219	41,528	3 01	18.7
1894	4,310	490,317	2,067,284	79,260	3,500	2,150,044	37,838	2 97	17.5
1893	4,209	479,489	1,990,728	70,431	9,800	2,070,959	37,781	3 26	18 2
1892	4,051	495,986	1,962,701	70,520	7,400	2,040,621	37,655	3 21	18.5
1891	3,973	510,974	1,998,248	76,662	8,050	2,082,960	34,370	2 70	16 5
1890	3,683	457,373	1,870,713	90,070	7,836	1,968,619	31,006	2 73	15 8
1889	3,147	369,256	1,509,882	73,707	7,960	1,591,549	24,489	2 60	15 4
1888	2,736	330,779	1,371,629	242,358	8,235	1,622,212	25,505	2 91	15 7
1887	2,141	268,059	1,028,975	158,856	2,150	1,189,981	20,174	3 21	17 0
1886	1,968	256,057	927,005	135,263	4,150	1,066,418	18,343	2 95	17.2
Nipissing:									
1895	3,559	243,244	1,338,168	186,982	4,500	1,529,650	42,687	3 77	27 9
1894	3,294	217,770	1,143,534	188,850	6,100	1,339,484	35,709	3 19	26 7
1893	3,160	200,716	1,065,911	162,518	15,650	1,244,079	31,184	2 98	25.1
1892	2,576	202,948	982,171	167,645	33,170	1,172,856	28,725	2 92	24 5
1891	2,375	196,516	935,642	147,883	20,830	1,124,355	24,091	2 69	21.4
1890	2,224	199,820	761,402	146,071	5,650	913,183	22,178	2 50	24 3
1889	1,808	162,735	599,834	121,602	22,500	743,936	16,720	2 44	20.5
1888	1,458	136,921	518,939	131,635	5,650	656,214	13,608	2 07	18 3
1887	1,228	120,246	427,470	129,765	800	558,035	9,683	1 93	16 3
1886	679	51,944	277,507	106,939	600	385,046	7,356	2 94	18 9
Manitoulin:									
1895	1,774	222,704	763,573	37,630	200	801,403	16,065	2 93	20 0
1894	1,935	223,013	744,500	60,210	1,100	804,810	18,701	3 43	23 3
1893	1,723	213,141	721,104	49,017	1,100	771,221	17,541	3 44	22.7
1892	1,678	208,352	749,606	36,088	400	786,044	16,762	2 94	21 3
1891	1,730	215,715	745,136	46,554	900	792,590	16,987	2 99	21 4
1890	1,633	212,763	717,050	23,679	2,800	744,429	16,958	3 06	22 8
1889	1,611	226,530	685,345	70,305	100	755,750	14,308	2 71	18 9
1888	1,583	206,411	609,783	120,227	.....	729,980	16,180	3 10	22.1
1887	1,225	218,275	660,002	72,416	400	732,818	16,162	3 19	22 1
1886	1,533	206,538	633,250	87,889	800	721,939	14,486	2 88	20.0

ASSESSMENT AND TAXATION.—*Concluded.*

Counties.	No. of rate-payers.	No. of acres.	Assessed values.				Taxes imposed for all purposes.		
			Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.	Mills on $.
			$	$	$	$	$	$ c.	
ALGOMA:									
1895	3,629	354,556	2,140,170	86,974	13,400	2,240,544	46,015	4 76	20.5
1894	3,284	342,948	2,086,946	112,030	2,850	2,201,826	45,026	5 21	20.4
1893	2,888	300,283	1,993,102	52,040	3,500	2,048,642	53,072	6 13	25.9
1892	2,462	267,369	2,001,431	51,615	1,775	2,054,821	43,686	5 94	21.3
1891	2,296	255,731	1,917,948	55,911	6,520	1,980,379	42,762	6 08	21.6
1890	1,912	211,470	1,747,416	70,480	6,900	1,824,796	35,857	6 69	19.6
1889	1,686	161,624	1,694,151	67,945	9,000	1,771,096	26,593	5 53	15.0
1888	1,432	123,758	1,151,317	95,489	14,350	1,261,156	18,673	4 81	14.8
1887	870	88,521	985,630	80,246	10,600	1,076,476	10,406	3 59	9.7
1886	634	87,158	436,845	35,735	3,100	475,680	7,748	2 91	16.3
THUNDER BAY:									
1895	1,998	257,199	2,494,350	123,400	47,350	2,665,100	65,194	11 69	24.5
1894	2,332	258,731	2,661,844	140,900	48,450	2,851,194	65,127	11 74	22.8
1893	1,953	258,735	2,917,062	175,050	63,450	3,155,562	69,572	11 91	22.0
1892	1,535	255,733	2,814,827	234,683	39,800	3 089,310	64,526	12 40	20.9
1891	1,480	256,397	2,708,903	147,850	32,300	2,889,053	51,538	11 48	17.8
1890	1,683	258,005	2,267,517	164,850	37,300	2,469,667	41,133	7 39	16.7
1889	1,359	255,918	2,787,869	164,640	29,350	2,981,859	50,903	7 37	17.1
1888	1,261	251,918	2,412,413	159,192	35,600	2,607,205	44,463	7 26	17.1
1887	1,198	156,150	1,751,584	168,133	55,310	1,975,027	30,485	4 91	15.4
1886	1,249	154,660	1,395,469	217,200	51,100	1,663,769	36,280	6 29	21.8
RAINY RIVER:									
1895	1,517	20,846	1,176,816	143,636	1,000	1,321,452	23,577	6 15	17.8
1894	1,712	20,846	1,084,634	152,407	4,400	1,241,441	19,027	4 71	15.3
1893	1,323	19,495	1,003,728	185,693	23,900	1,213,321	20,441	5 52	16.8
1892	1,140	19,221	1,018,119	148,265	1,800	1,168,124	11,920	3 63	10.2
1891	1,077	17,073	1,057,018	69,625	5,300	1,131,943	17,962	5 85	15.9
1890	776	8,320	832,136	128,405	7,900	968,441	15,541	6 89	16.0
1889	660	8,320	555,175	38,500	11,800	605,475	15,817	7 47	26.1
1888	356	8,320	437,530	76,350	12,900	526,780	8,599	5 09	16.3
1887	275	5,760	242,195	48,800	2,250	293,245	7,425	7 81	25.3
1886	227	5,760	273,885	80,160	13,100	367,145	8,428	8 31	23.0

ASSESSMENT AND TAXATION.

TABLE IV. Summary statement for the Province of Ontario of the number of Ratepayers and Area as shown by the assessment rolls, and of the assessed Values and amount of Taxes imposed, as shown by the collection rolls, together with the average rate of taxes per head of population assessed as resident, and rate in mills on the dollar of total assessed value for the ten years, 1886 to 1895, classified as rural (townships), urban (towns and incorporated villages) and cities.

Municipalities.	No. of ratepayers.	No. of acres assessed.	Assessed values.				Taxes imposed for all purposes.		
			Real property.	Personal property.	Taxable income.	Total.	Total.	Per head.	Mills on the dollar
1895.			$	$	$	$	$	$ c.	
Townships	355,828	23,114,356	445,375,439	2,762,179	279,641	448,417,259	4,473,269	4 03	9.98
Towns	93,803	146,308	84,192,880	6,971,021	1,675,669	92,839,570	2,000,429	6 77	21. 5
Villages	42,725	100,943	28,344,733	1,877,355	296,187	30,518,275	565,137	4 15	18. 5
Cities	115,161	40,548	225,079,539	16,852,113	7,759,410	249,691,062	5,277,594	12 68	21. 1
Total	607,517	23,402,155	782,992,591	28,462,668	10,010,907	821,466,166	12,316,429	6 29	15. 0
1894.									
Townships	352,414	23,039,610	448,216,984	2,899,503	359,616	451,476,103	4,579,044	4 15	10. 1
Towns	91,824	146,824	83,571,766	7,083,145	1,582,239	92,237,150	1,934,167	6 62	21. 0
Villages	41,053	100,747	27,791,845	1,963,265	281,133	29,836,243	548,356	4 17	18. 4
Cities	111,307	40,590	227,578,882	17,323,301	7,727,691	252,629,874	5,258,475	12 86	20. 8
Total	596,598	23,327,741	786,959,477	29,269,214	9,950,679	826,179,370	12,320,312	6 36	14. 9
1893.									
Rural	347,406	22,959,280	448,311,559	2,957,944	359,600	451,629,103	4,629,028	4 22	10.25
Urban	129,260	246,780	111,724,238	8,923,403	2,029,029	122,676,670	2,449 452	5 90	20. 0
Cities	110,248	40,258	226,179,831	17,581,320	7,463,128	251,224,279	5,444,180	13 69	21. 7
Total	586,914	23,246,318	786,215,628	29,462,667	9,851,757	825,530,052	12,522,660	6 56	15. 17
1892.									
Rural	344,061	22,885,464	448,566,182	3,089,202	410,274	452,065,658	4,599,442	4 17	10.17
Urban	126,190	228,829	110,989,898	8,452,309	2,469,164	121,911,371	2,375,995	5 75	19. 5
Cities	110,004	40,258	222,997,515	18,928,105	9,308,478	251,234,098	4,828,133	12 26	19. 2
Total	580,255	23,154,551	782,553,595	30,469,616	12,187,916	825,211,127	11,803,570	6 18	14.30
1891.									
Rural	344,963	22,825,325	450,559,809	3,101,663	408,892	454,070,364	4,544,291	4 07	10.01
Urban	124,447	227,070	109,462,192	8,570,172	2,343,484	120,375,808	2,305,025	5 61	19. 1
Cities	109,788	39,498	216,091,585	19,460,460	8,849,177	244,401,222	4,918,482	12 44	20. 1
Total	579,198	23,091,898	776,113,546	31,132,295	11,601,553	818,847,394	11,767,748	6 12	14.37
1890.									
Rural	333,460	22,676,390	448,916,986	3,178,614	371,488	452,467,088	4,473,108	4 00	9.89
Urban	120,217	223,434	105,353,091	7,878,486	2,170,656	115,402,233	2,161,644	5 27	18. 7
Cities	101,373	39,498	202,907,967	19,300,295	8,538,688	230,746,950	4,262,733	10 96	18. 5
Total	555,050	22,939,322	757,178,044	30,357,395	11,080,832	798,616,271	10,897,485	5 68	13.65
1889.									
Rural	335,408	22,554,717	447,114,443	3,470 224	392,553	450,977,220	4,507,717	3 99	10.00
Urban	113,207	215,532	96,567,320	7,773,945	2,112,533	106,453,798	1,993,623	4 97	18. 7
Cities	97,348	38,498	177,634,932	18,826,684	8,013,182	204,474,798	3,746,858	9 97	18. 3
Total	547,963	22,808,747	721,316,695	30,070,853	10,518,268	761,905,816	10,248,198	5 37	13.45
1888.									
Rural	325,050	22,348,502	433,596,047	26,624,345	395,430	460,615,822	4,494,780	3 97	9.76
Urban	111,159	211,707	90,416,611	7,956,694	2,039,724	100,413,029	1,884,918	4 79	18. 8
Cities	94,916	36,961	160,239,217	19,345,906	8,040,596	187,625,719	3,540,264	10 01	18. 9
Total	531,125	22,597,170	684,251,875	53,926,945	10,475,750	748,654,570	9,919,962	5 28	13.26
1887.									
Rural	325,785	22,145,295	428,372,441	27,381,683	416,039	456,170,163	4,431,720	3 89	9.72
Urban	106,856	212,322	83,497,910	7,616,982	2,222,704	93,337,596	1,759,248	4 66	18. 8
Cities	91,583	36,163	140,795,414	18,226,775	8,781,990	167,804,179	3,109,145	9 40	18. 5
Total	524,023	22,393,780	652,665,765	53,225,440	11,420,733	717,311,938	9,300,113	5 03	12.97
1886.									
Rural	321,285	21,990,134	424,356,317	27,289,098	452,230	452,097,645	4,388,401	3 82	9.71
Urban	102,240	204,446	78,521,775	7,384,126	2,172,192	88,078,093	1,670,848	4 64	19. 0
Cities	88,611	35,373	129,231,595	16,925,710	8,047,616	154,204,921	2,950,136	9 23	19. 1
Total	512,136	22,229,953	632,109,687	51,598,934	10,672,038	694,380,659	9,009,385	4 93	13.97

POPULATION.

TABLE V. Showing for townships, town and village municipalities, grouped by counties, and for cities, the population of Ontario as taken by the municipal assessors in the two years, 1894-5.

Municipalities.	1895.	1894.
ESSEX :		
Anderdon	1,941	2,041
Colchester, N	1,436	1,639
Colchester, S	2,344	2,413
Gosfield, N	1,591	1,563
Gosfield, S	2,009	1,972
Maidstone	2,876	2,777
Malden	1,528	1,454
Mersea	3,807	3,666
Pelee Island	653	629
Rochester	2,417	2,567
Sandwich, E	2,574	2,358
Sandwich, S	1,582	1,544
Sandwich, W	2,370	2,241
Tilbury, N	2,264	2,212
Tilbury, W	1,738	2,064
Total for townships	31,130	31,140
Amherstburg	2,181	2,084
Essex	2,172	2,165
Leamington	1,860	1,788
Sandwich	1,295	1,358
**Walkerville*	1,149	1,157
Belle River	544	553
Kingsville	1,289	1,255
Total for towns and villages	10,490	10,360
KENT :		
Camden	2,688	2,772
Chatham	4,807	4,672
Dover	3,589	†3,558
Harwich	4,416	4,669
Howard	3,319	3,468
Orford	2,729	2,707
Raleigh	4,500	4,556
Romney	1,625	1,588
Tilbury, E	3,146	2,843
Zone	1,223	1,232
Total for townships	32,042	32,065
Blenheim	1,707	1,590
Bothwell	854	843
Dresden	1,801	1,840
Ridgetown	2,169	2,135
Thamesville	853	804
Tilbury	971	973
‡Wallaceburg	2,089	2,038
Total for towns and villages	10,444	10,223
ELGIN :		
Aldborough	4,785	4,625
Bayham	3,458	3,476
Dorchester, S	1,461	1,485
Dunwich	3,181	3,001
Malahide	3,648	3,630
ELGIN.—*Continued.*		
Southwold	4,235	4,147
Yarmouth	4,808	4,774
Total for townships	25,576	25,138
Aylmer	2,159	2,163
Dutton	771	857
Port Stanley	660	614
Springfield	403	422
Vienna	386	360
Total for town and villages	4,379	4,416
NORFOLK :		
Charlotteville	3,410	3,473
Houghton	1,960	1,932
Middleton	2,529	2,638
Townsend	3,837	3,646
Walsingham, N	2,248	2,209
Walsingham, S	1,821	1,910
Windham	3,988	3,807
Woodhouse	2,221	1,842
Total for townships	22,014	21,457
Simcoe	2,646	2,626
Delhi	852	748
Port Dover	1,145	994
Port Rowan	637	586
Waterford	1,160	1,118
Total for town and villages	6,440	6,072
HALDIMAND :		
Canborough	914	927
Cayuga, N	1,700	1,737
Cayuga, S	825	818
Dunn	885	910
Moulton	1,802	1,739
Oneida	1,585	1,592
Rainham	1,690	1,707
Seneca	1,904	1,950
Sherbrooke	374	385
Walpole	4,248	4,133
Total for townships	15,927	15,898
Caledonia	960	954
Cayuga	1,107	1,063
Dunnville	1,832	1,768
Hagersville	961	974
Total for villages	4,860	4,759
WELLAND :		
Bertie	3,059	4,073
Crowland	982	1,002
Humberstone	2,634	2,787

NOTE.—Towns are printed in italics. "Villages" means incorporated villages.
*Separated from county for municipal purposes. †Figures from return of 1893.
‡Becomes a town in 1896.

TABLE V.—POPULATION.—*Continued.*

Municipalities.	1895.	1894.
WELLAND.—*Continued.*		
Pelham	2,413	2,255
Stamford	2,047	1,999
Thorold	1,932	1,980
Wainfleet	2,474	2,458
Willoughby	940	929
Total for townships	16,481	17,483
Niagara Falls	3,734	3,619
Thorold	2,246	2,326
Welland	1,931	1,866
*Bridgeburg	1,249	.....
Chippawa	549	561
Fort Erie	852	918
Niagara Falls South	1,309	1,298
Port Colborne	1,136	1,156
Total for towns and villages	13,006	11,744
LAMBTON:		
Bosanquet	2,435	2,451
Brooke	3,272	3,268
Dawn	3,018	2,757
Enniskillen	5,201	5,201
Euphemia	2,209	2,183
Moore	5,028	5,609
Plympton	3,343	3,636
Sarnia	2,143	2,083
Sombra	3,641	3,656
Warwick	3,450	†3,589
Total for townships	33,740	34,133
Forest	1,559	1,554
Petrolea	4,342	4,483
Sarnia	6,287	6,525
Alvinston	1,055	1,086
Arkona	477	479
Oil Springs	1,002	1,037
Point Edward	1,405	1,481
Thedford	583	577
Watford	1,260	1,278
Wyoming	823	827
Total for towns and villages	18,793	19,327
HURON:		
Ashfield	3,371	3,385
Colborne	1,830	1,866
Goderich	2,637	2,462
Grey	3,643	3,623
Hay	4,045	3,995
Hnron	4,396	4,356
Hulbert	2,805	2,913
McKillop	2,085	2,060
Morris	2,849	2,950
Stanley	2,247	2,222
Stephen	3,842	3,752
Tuckersmith	2,614	2,675
Turnberry	2,354	2,364
Usborne	2,400	2,438
Wawanosh, E	1,839	1,878
Wawanosh, W	2,138	2,161
Total for townships	45,913	45,686
Clinton	2,443	2,423
Goderich	3,698	3,638
Seaforth	2,412	2,438
Wingham	2,195	2,225
Bayfield	641	669
Blyth	987	912
Brussels	1,203	1,203
Exeter	1,756	1,751
Wroxeter	496	459
Total for towns and villages	15,831	15,718
BRUCE:		
Albemarle	1,475	1,423
Amabel	2,862	2,808
Arran	2,569	2,696
Brant	4,279	3,948
Bruce	3,024	2,909
Carrick	5,091	5,018
Culross	3,089	2,890
Eastnor	1,536	1,435
Elderslie	2,462	2,502
Greenock	2,863	2,934
Huron	3,645	3,692
Kincardine	3,097	2,818
Kinloss	2,554	2,456
Lindsay and St. Edmunds	720	816
Saugeen	1,451	1,471
Total for townships	40,717	39,816
Kincardine	2,680	2,860
Walkerton	3,251	3,114
Wiarton	2,180	2,173
Chesley	1,740	1,460
Lucknow	1,382	1,121
Paisley	1,174	1,098
Port Elgin	1,421	1,700
Southampton	1,456	1,365
Tara	710	721
Teeswater	1,148	1,157
Tiverton	497	397
Total for towns and villages	17,658	17,166
GREY:		
Artemesia	3,513	3,430
Bentinck	4,664	4,502
Collingwood	3,389	3,671
Derby	1,919	1,924
Egremont	3,389	3,241
Euphrasia	3,383	3,115
Glenelg	3,016	3,004
Holland	3,428	3,091
Keppel	3,874	3,931
Normanby	4,873	4,899
Osprey	3,321	3,244
Proton	3,007	3,039

*Incorporated in 1895 out of Bertie township. †Taken from return of 1893.

TABLE V.—POPULATION.—*Continued.*

Municipalities.	1895.	1894.
GREY.—*Continued.*		
St. Vincent	2,936	2,958
Sarawak	1,176	1,062
Sullivan	3,423	3,657
Sydenham	3,610	3,613
Total for townships	53,113	52,851
Durham	1,235	1,224
Meaford	1,922	1,790
Owen Sound	7,461	7,339
Thornbury	864	867
Dundalk	761	719
Markdale	738	718
Total for towns and villages	12,981	12,657
SIMCOE:		
Adjala	1,924	1,957
Essa	3,982	3,971
Flos	3,292	3,111
Gwillimbury, W	2,374	2,293
Innisfil	3,758	3,457
Matchedash	393	403
Medonte	3,629	3,903
Nottawasaga	4,928	5,310
Orillia	3,546	3,499
Oro	3,959	3,857
Sunnidale	2,343	2,323
Tay	3,692	3,799
Tecumseth	3,408	3,233
Tiny	3,707	3,857
Tossorontio	1,588	1,650
Vespra	2,732	2,781
Total for townships	49,255	49,404
Alliston	1,909	1,925
Barrie	5,024	4,929
Collingwood	5,410	5,166
Midland	1,847	1,617
Orillia	5,050	4,871
Penetanguishene	2,408	2,323
Stayner	1,210	1,172
Allandale	976	983
Beeton	675	555
Bradford	914	907
Creemore	577	721
Tottenham	544	537
Total for towns and villages	26,544	25,706
MIDDLESEX:		
Adelaide	2,229	2,070
Biddulph	2,412	2,350
Caradoc	3,830	3,839
Delaware	1,537	1,571
Dorchester, N	3,651	3,613
Ekfrid	2,664	2,659
Lobo	2,706	2,660
London	8,588	8,612
McGillivray	2,998	3,037
Metcalfe	1,537	1,455
Mosa	2,690	2,586
MIDDLESEX.—*Continued.*		
Nissouri, W	2,570	2,600
Westminster	4,653	4,306
Williams, E	1,487	1,479
Williams, W	1,612	1,712
Total for townships	45,164	44,549
Parkhill	1,567	1,553
Strathroy	3,057	3,016
Ailsa Craig	712	635
Glencoe	1,011	994
London West	1,947	1,875
Lucan	803	849
Newbury	403	425
Wardsville	333	313
Total for towns and villages	9,833	9,660
OXFORD:		
Blandford	1,648	1,698
Blenheim	4,720	4,629
Dereham	3,573	3,601
Nissouri, E	2,699	2,676
Norwich, N	2,186	2,190
Norwich, S	2,450	2,483
Oxford, E	1,972	1,927
Oxford, N	1,339	1,291
Oxford, W	2,007	1,996
Zorra, E	3,764	3,784
Zorra, W	2,663	2,725
Total for townships	29,021	29,010
Ingersoll	4,475	4,414
Tilsonburg	2,156	2,214
Woodstock	8,791	8,888
Embro	617	617
Norwich	1,169	1,198
Total for towns and villages	17,208	17,331
BRANT:		
Brantford	5,279	5,254
Burford	4,622	4,527
Dumfries, S	2,848	2,821
Oakland	768	794
Onondaga	1,242	1,215
Total for townships	14,759	14,611
Paris	3,046	3,066
PERTH:		
Blanshard	2,724	2,692
Downie	2,871	2,838
Easthope, N	2,226	2,291
Easthope, S	1,876	1,909
Ellice	3,283	3,140
Elma	3,967	3,938
Fullarton	2,080	2,181
Hibbert	2,232	2,239
Logan	2,739	2,733
Mornington	2,994	2,964

TABLE V.—POPULATION.—*Continued.*

Municipalities.	1895.	1894.
PERTH.—*Continued.*		
Wallace	2,930	2,977
Total for townships	29,922	29,902
Listowel	2,685	2,552
Mitchell	2,205	2,199
St. Mary's	3,273	3,273
Milverton	694	691
Total for towns and village	8,767	8,625
WELLINGTON:		
Arthur	3,187	†2,968
Eramosa	2,473	2,767
Erin	3,339	3,633
Garafraxa, W	2,718	2,716
Guelph	2,263	2,207
Luther, W	1,899	2,047
Maryborough	3,015	3,033
Minto	3,090	3,160
Nichol	1,979	1,965
Peel	4,143	4,215
Pilkington	1,411	1,406
Puslinch	3,459	3,363
Total for townships	32,976	33,478
Harriston	1,806	1,655
Mount Forest	2,440	2,437
Palmerston	1,983	1,968
Arthur	1,290	1,219
Clifford	618	614
Drayton	845	770
Elora	1,273	1,272
Erin	510	489
Fergus	1,621	1,591
Total for towns and villages	12,386	12,015
WATERLOO:		
Dumfries, N	2,258	2,424
Waterloo	6,970	6,953
Wellesley	5,007	5,000
Wilmot	5,306	5,334
Woolwich	4,433	4,410
Total for townships	24,074	24,121
Berlin	7,778	7,565
Galt	7,420	7,230
Waterloo	3,227	3,087
Ayr	893	943
Elmira	1,631	997
Hespeler	1,801	1,669
New Hamburg	1,169	1,150
Preston	2,017	1,889
Total for towns and villages	25,936	24,530
DUFFERIN:		
Amaranth	2,623	2,635
Garafraxa, E	2,601	1,041
Luther, E	2,291	2,474
Melancthon	3,024	3,240

Municipalities.	1895.	1894.
DUFFERIN.—*Continued.*		
Mono	3,390	3,404
Mulmur	2,975	3,123
Total for townships	16,877	16,667
Orangeville	3,700	3,600
Shelburne	1,168	1,157
Total for town and village	4,868	4,757
LINCOLN:		
Caistor	1,672	1,671
Clinton	1,898	1,946
Gainsborough	2,481	2,391
Grantham	1,794	1,821
Grimsby, N	1,165	1,108
Grimsby, S	1,346	1,315
Louth	1,753	1,708
Niagara	1,791	1,824
Total for townships	13,900	13,784
Niagara	1,307	1,136
Beamsville	926	880
Grimsby	938	898
Merrittton	1,596	1,587
Port Dalhousie	1,010	1,034
Total for town and villages	5,777	5,435
WENTWORTH:		
Ancaster	4,073	3,954
Barton	3,477	3,498
Beverly	4,308	4,412
Binbrook	1,443	1,506
Flamborough, E	2,532	2,506
Flamborough, W	2,881	2,879
Glanford	1,530	1,526
Saltfleet	2,578	2,545
Total for townships	22,822	22,826
Dundas	2,979	3,042
Waterdown	698	692
Total for town and village	3,677	3,734
HALTON:		
Esquesing	3,790	3,887
Nassagaweya	2,580	2,565
Nelson	2,845	2,793
Trafalgar	3,677	3,674
Total for townships	12,892	12,919
Milton	1,360	1,409
Oakville	1,689	1,598
Acton	1,995	1,946
Burlington	1,708	1,160
Georgetown	1,448	1,401
Total for towns and villages	7,080	6,814

*Separated from county for municipal purposes. †Taken from return of 1892.

TABLE V.—POPULATION.—*Continued.*

Municipalities.	1895.	1894.	Municipalities.	1895.	1894.
PEEL:			ONTARIO.—*Continued.*		
Albion	2,798	2,714	Port Perry	1,550	1,558
Caledon	4,039	4,072			
Chinguacousy	4,180	4,157	Total for towns and villages	11,927	12,085
Toronto	5,176	5,249			
Toronto Gore	1,107	1,155	DURHAM:		
			Cartwright	1,908	1,895
Total for townships	17,300	17,347	Cavan	2,801	2,798
			Clarke	4,245	4,256
Brampton	3,030	3,085	Darlington	4,488	4,370
Bolton	687	682	Hope	3,712	3,840
Streetsville	672	665	Manvers	3,357	3,186
Total for town and villages	4,389	4,432	Total for townships	20,511	20,345
YORK:			*Bowmanville*	2,874	3,034
Etobicoke	3,607	3,500	*Port Hope*	4,726	4,718
Georgina	1,639	1,690	Millbrook	887	928
Gwillimbury, E	2,880	3,153	Newcastle	687	629
Gwillimbury, N	1,375	1,522			
King	5,251	5,090	Total for towns and villages	9,174	9,309
Markham	5,199	5,055			
Scarborough	3,816	3,712	NORTHUMBERLAND:		
Vaughan	4,636	4,980	Alnwick	1,033	1,055
Whitchurch	3,797	3,754	Brighton	2,820	2,698
York	8,018	8,290	Cramahe	2,712	2,767
			Haldimand	4,190	4,208
Total for townships	40,218	40,746	Hamilton	4,225	4,250
			Monaghan, S	1,035	1,034
Aurora	1,729	1,828	Murray	2,818	*2,875
Newmarket	2,027	2,081	Percy	3,119	3,216
North Toronto	1,639	1,646	Seymour	3,195	2,954
Toronto Junction	4,434	4,280			
East Toronto	1,125	1,172	Total for townships	25,147	25,057
Holland Landing	455	416			
Markham	1,061	1,085	*Cobourg*	4,267	4,312
Richmond Hill	719	688	Brighton	1,434	1,340
Stouffville	1,300	1,231	Campbellford	2,255	2,385
Sutton	640	597	Colborne	1,003	981
Weston	1,243	1,250	Hastings	739	709
Woodbridge	760	799			
			Total for town and villages	9,698	9,677
Total for towns and villages	17,132	17,073			
			PRINCE EDWARD:		
ONTARIO:			Ameliasburg	3,079	2,937
Brock	3,612	3,542	Athol	1,186	1,219
Mara	3,004	3,006	Hallowell	3,128	3,166
Pickering	5,424	5,432	Hillier	1,640	1,697
Rama	1,340	1,325	Marysburg, N	1,320	1,424
Reach	3,818	3,752	Marysburg, S	1,379	1,395
Scott	2,225	2,193	Sophiasburg	1,908	1,970
Scugog	509	531			
Thorah	1,449	1,338	Total for townships	13,640	13,808
Uxbridge	2,853	2,830			
Whitby, E	2,666	2,469	*Picton*	3,512	3,246
Whitby	2,315	2,275	Wellington	491	501
Total for townships	29,215	28,696	Total for town and village	4,003	3,747
Oshawa	3,971	4,035	LENNOX AND ADDINGTON:		
Uxbridge	1,954	1,944	Adolphustown	548	561
Whitby	2,585	2,576	Amherst Island	848	827
Beaverton	727	813	Camden, E	3,920	3,806
Cannington	1,140	1,159	Denbigh, etc	969	955

* Taken from return of 1893.

TABLE V.—POPULATION.—*Continued.*

Municipalities.	1895.	1894.
LENNOX AND ADDINGTON.—*Con.*		
Ernestown	3,346	2,711
Fredericksburg, N	1,423	1,473
Fredericksburg, S	1,035	1,075
Kaladar, Anglesea, etc	1,124	1,116
Richmond	2,205	2,615
Sheffield	2,041	2,061
Total for townships	17,459	17,260
Napanee	3,053	2,991
Bath	437	452
Newburg	608	578
Total for town and villages	4,098	4,021
FRONTENAC:		
Barrie	638	620
Bedford	1,586	1,561
Clarendon and Miller	807	795
Hinchinbrooke	1,218	1,233
Howe Island	270	300
Kennebec	1,233	1,284
Kingston	2,994	2,656
Loughborough	1,687	1,764
Olden	931	962
Oso	1,059	1,083
Palmerston and Canonto	972	963
Pittsburg	2,379	2,333
Portland	2,045	2,058
Storrington	1,768	1,873
Wolfe Island	1,474	1,630
Total for townships	21,061	21,115
Garden Island	369	360
Portsmouth	729	834
Total for villages	1,098	1,194
LEEDS:		
Bastard and Burgess	2,713	2,866
Crosby, N	1,626	1,645
Crosby, S	1,727	1,739
Elizabethtown	3,884	3,990
Elmsley, S	785	796
Kitley	1,961	1,956
Leeds and Lansdowne, Front	2,960	3,129
Leeds and Lansdowne, Rear	2,189	2,147
Yonge and Escott, Front	2,414	2,581
Yonge and Escott, Rear	1,204	1,202
Total for townships	21,363	21,972
* *Brockville*	9,134	9,231
Gananoque	3,619	3,589
Athens	800	818
Newboro'	439	389
Total for towns and villages	14,067	13,425
† GRENVILLE:		
Augusta	3,887	3,765
Edwardsburg	3,709	3,708
Gower, S	768	718

Municipalities.	1895.	1894.
GRENVILLE.—*Continued.*		
Oxford on Rideau	3,048	2,963
Wolford	1,814	1,879
Total for townships	12,967	13,133
‡ *Prescott*	2,817	2,938
Cardinal	996	986
Kemptville	1,206	1,251
Merrickville	1,046	1,025
Total for town and villages	6,065	6,200
DUNDAS:		
Matilda	3,722	3,890
Mountain	2,814	2,855
Williamsburg	3,705	3,651
Winchester	3,310	3,254
Total for townships	13,551	13,650
Chesterville	774	753
Iroquois	1,110	1,133
Morrisburg	1,736	1,639
Winchester	954	952
Total for villages	4,574	4,477
§ STORMONT:		
Cornwall	5,271	5,367
Finch	2,988	3,033
Osnabruck	4,574	4,623
Roxborough	4,248	4,207
Total for townships	17,081	17,230
Cornwall	6,056	6,013
§ GLENGARRY:		
Charlottenburg	5,126	4,743
Kenyon	4,301	3,869
Lancaster	3,558	3,165
Lochiel	4,495	4,496
Total for townships	17,480	16,512
Alexandria	1,589	1,460
Lancaster	581	493
Maxville	549	570
Total for villages	2,641	2,523
PRESCOTT:		
Alfred	3,187	3,110
Caledonia	1,701	1,654
Hawkesbury, E	4,[illegible]	4,[illegible]
Hawkesbury, W	2,[illegible]	2,[illegible]
Longueuil	978	980
Plantagenet, N	3,677	3,518
Plantagenet, S	2,965	2,865
Total for townships	19,[illegible]	19,[illegible]
* Hawkesbury	2,097	2,079

*Separated from county for municipal purposes. †United with Leeds for municipal purposes. ‡Separated from county for municipal purposes. §Limited to Dundas for municipal purposes. ||Figures for 1894 used, as clerk says 1895 figures are inaccurate. *Becomes a town in 1896.

TABLE V.—POPULATION.—*Continued.*

Municipalities.	1895.	1894.
PRESCOTT.—*Continued.*		
L'Orignal	966	803
Total for villages	3,033	2,882
*RUSSELL:		
Cambridge	2,608	2,633
Clarence	4,532	4,295
Cumberland	3,609	3,899
Russell	2,944	2,787
Total for townships	13,693	13,614
Casselman	795	704
Rockland	1,540	1,222
Total for villages	2,335	1,926
CARLETON:		
Fitzroy	2,578	2,509
Gloucester	†5,847	†5,847
Goulbourn	2,484	2,469
Gower, N	2,190	2,133
Huntley	2,152	2,178
March	1,108	1,120
Marlborough	1,462	1,479
Nepean	4,341	4,240
Osgoode	4,320	4,388
Torbolton	930	942
Total for townships	27,412	27,305
Hintonburg	1,927	1,743
Ottawa, East	787	742
Richmond	357	358
Total for villages	3,071	2,843
RENFREW:		
Admaston	2,098	2,239
Algona, S	829	831
Alice and Fraser	1,764	1,744
Bagot and Blithefield	1,438	1,272
Bromley	1,816	1,735
Brougham	536	522
Brudenell and Lynedoch	1,312	1,307
Grattan	1,464	1,557
Griffith and Matawatchan	718	680
Hagarty, Jones, etc	2,205	2,062
Head, Clara and Maria	406	410
Horton	1,361	1,341
McNab	3,470	3,388
Pembroke	725	675
Petewawa	864	896
Radcliffe and Raglan	996	1,001
Ralph, Buchanan and Wylie	867	817
Ross	2,702	2,587
Sebastopol	690	677
Stafford	1,018	1,007
Westmeath	3,026	3,094
Wilberforce and Algona, N	2,249	2,146
Total for townships	32,554	31,988
RENFREW.—*Continued.*		
Arnprior	3,713	3,545
Pembroke	4,628	4,484
Renfrew	2,909	2,568
Eganville	1,183	1,045
Total for towns and village	12,341	11,642
LANARK:		
Bathurst	2,564	2,533
Beckwith	1,661	1,695
Burgess N	877	884
Dalhousie and Sherbrooke N	1,947	1,918
Darling	730	712
Drummond	1,949	1,894
Elmsley, N	1,054	1,038
Lanark	1,726	1,740
Lavant	630	607
Montague	2,088	1,877
Pakenham	1,832	1,814
Ramsay	2,182	2,164
Sherbrooke S	912	818
Total for townships	20,152	19,694
Almonte	2,943	2,904
Carleton Place	4,310	4,298
‡*Perth*	3,160	3,111
Smith's Falls	4,242	4,222
Lanark	852	788
Total for towns and village	15,507	15,323
VICTORIA:		
Bexley	894	762
Carden	723	713
Dalton	520	519
Eldon	2,700	2,647
Emily	2,110	2,189
Fenelon	2,311	2,328
Laxton, Digby and Longford	793	759
Mariposa	3,817	3,850
Ops	2,449	2,451
Somerville	1,780	1,876
Verulam	1,859	1,805
Total for townships	19,956	19,899
Lindsay	6,799	6,725
Bobcaygeon	825	715
Fenelon Falls	1,181	1,134
Omemee	578	604
Woodville	554	588
Total for town and villages	9,937	9,766
PETERBOROUGH:		
Asphodel	1,697	1,658
Belmont and Methuen	1,924	1,894
Burleigh and Anstruther	583	598
Chandos	636	701
Douro	1,898	1,877
Dummer	2,085	2,157

*United to Prescott for municipal purposes. †Figures for 1894, as assessor's for 1895 are incomplete.
‡Separated from county for municipal purposes.

TABLE V.—POPULATION.—*Continued.*

Municipalities.	1895.	1894.
PETERBOROUGH.—*Continued.*		
Emmismore	*881	881
Galway and Cavendish	919	739
Harvey	1,088	1,001
Monaghan N	823	920
Otonabee	3,340	3,302
Smith	2,701	2,684
Total for townships	18,578	18,418
†*Peterborough*	10,835	10,668
Ashburnham	1,667	1,659
Havelock	814	1,270
Lakefield	1,079	1,040
Norwood	1,079	709
Total for town and villages	15,474	15,346
HALIBURTON:		
Anson and Hindon	274	236
Cardiff	596	567
Dysart	988	975
Glamorgan	567	518
Lutterworth	459	426
Minden	1,192	1,140
Monmouth	541	521
Snowdon	795	786
Stanhope and Sherbourne	632	589
Total for townships	5,975	5,758
HASTINGS:		
Bangor, Wicklow and McClure	770	844
Carlow	530	513
Dungannon	739	748
Elzevir and Grimsthorpe	984	1,039
Faraday	978	795
Hungerford	4,945	4,907
Huntingdon	2,306	2,307
Limerick	522	504
Madoc	2,529	2,548
Marmora and Lake	1,968	1,951
Mayo	449	417
Monteagle and Herschel	1,523	1,452
Rawdon	3,384	3,271
Sidney	4,276	4,046
Thurlow	4,836	4,857
Tudor and Cashel	774	788
Tyendinaga	3,770	3,709
Wollaston	691	672
Total for townships	35,554	35,368
Deseronto	2,964	3,679
Trenton	4,188	3,962
Madoc	1,066	1,017
Sterling	798	770
Tweed	889	866
Total for towns and villages	9,905	10,294
MUSKOKA:		
Brunel	795	695
Cardwell	429	416
Chaffey	1,111	869
Draper	892	1,035
McLean and Ridout	749	724
Macaulay	715	691
Medora and Wood	1,009	960
Monck	854	780
Morrison	902	787
Muskoka	624	580
Oakley	354	379
Ryde	555	523
Stephenson	1,016	945
Stisted	618	542
Watt	860	841
Total for townships	11,404	10,737
Bracebridge	1,880	1,765
Gravenhurst	1,865	1,836
Huntsville	1,514	1,477
Total for towns and village	5,259	5,078
PARRY SOUND:		
Armour	940	920
Chapman	612	583
Christie	332	247
Foley	491	413
Hagerman	513	513
Himsworth N.	204	214
Himsworth S.	1,367	1,215
Humphrey	547	546
Joly	267	306
McDougall	339	299
McKellar	605	619
McMurrich	694	692
Machar	891	706
Nipissing	544	283
Perry	1,255	1,150
Ryerson	639	641
Strong	676	556
Total for townships	10,916	9,906
Parry Sound	1,853	1,787
Burk's Falls	585	535
Sundridge	424	395
Total for town and villages	2,862	2,717
NIPISSING:		
Bonfield	1,281	1,237
Caldwell	469	417
Calvin	492	401
Cameron	87	103
Ferris	512	600
McKim	625	748
Mattawan	731	226
Papineau	624	401
Springer	1,215	1,103
Widdifield	417	392
Total for townships	5,943	5,627

*Figures for 1894 used as 1895 are enumerated. †Separated from county for municipal purposes.

TABLE V.—POPULATION.—*Concluded.*

Municipalities.	1895.	1894.
NIPISSING.—*Continued.*		
Mattawa	1,800	1,780
North Bay	2,168	2,361
Sudbury	1,408	1,417
Total for towns	5,376	5,558
MANITOULIN:		
Assiginack	1,040	1,064
Billings	329	275
Burpee	193	134
Carnarvon	533	669
Cockburn Island	155	141
Gordon	700	650
Howland	840	870
Sandfield	239	263
Tehkummah	389	361
Total for townships	4,418	4,427
Gore Bay	520	359
Little Current	546	700
Total for towns	1,066	1,059
ALGOMA:		
Balfour	480	327
Drury, Denison and Graham	239	170
Hallam	464	432
Hilton	300	502
Jocelyn	395	325
Johnson and Tarbutt	553	568
Laird	259	253
Macdonald and Meredith	413	295
Plummer additional	545	516
Rayside	468	415
St Joseph	797	698
Salter, May and 116	653	522
Sault Ste. Marie	500	387
Thessalon	463	483
Total for townships	6,529	5,893

Municipalities.	1895.	1894.
ALGOMA.—*Continued.*		
Sault Ste. Marie	2,495	2,130
Thessalon	637	620
Total for towns	3,132	2,750
THUNDER BAY:		
Neebing	63	75
Oliver	355	388
Shuniah	136	131
Total for townships	554	594
Fort William	2,016	2,088
Port Arthur	3,005	2,866
Total for towns	5,021	4,954
RAINY RIVER:		
Alberton	249	260
Keewatin	618	598
Total for townships	867	858
Rat Portage	2,969	3,182
CITIES:		
Belleville (Hastings)	10,318	10,117
Brantford (Brant)	16,314	15,677
Chatham (Kent)	9,019	8,713
Guelph (Wellington)	10,716	10,495
Hamilton (Wentworth)	48,803	48,481
Kingston (Frontenac)	17,955	17,808
London (Middlesex)	34,429	33,427
Ottawa (Carleton)	49,674	47,775
St. Catharines (Lincoln)	9,652	9,622
St. Thomas (Elgin)	10,563	10,691
Stratford (Perth)	10,365	10,227
Toronto (York)	176,858	174,309
Windsor (Essex)	11,549	11,468
Total for cities	416,215	408,810

POPULATION

TABLE VI. Showing by counties (including townships, towns, villages and cities) the population of Ontario as taken by the municipal assessors for the ten years, 1886-95.

Counties.	1895.	1894.	1893.	1892.	1891.	1890.	1889.	1888.	1887.	1886.
Essex	53,169	52,968	52,089	51,311	51,157	50,877	50,315	48,600	47,395	46,752
Kent	51,505	51,001	50,346	51,258	52,236	52,684	51,616	50,135	49,487	48,702
Elgin	40,518	40,245	39,178	39,645	39,868	39,877	40,585	40,948	40,769	40,596
Norfolk	28,464	27,529	28,172	28,381	28,862	29,415	29,662	29,093	29,282	29,677
Haldimand	20,787	20,657	20,510	20,656	20,683	20,949	21,080	21,071	21,671	21,735
Welland	29,487	29,227	28,082	27,951	27,901	27,735	28,369	29,205	29,262	28,626
Lambton	52,583	53,760	53,751	53,092	53,181	52,890	50,392	50,973	50,170	48,321
Huron	61,744	61,494	60,467	60,282	61,272	61,771	63,737	65,079	66,022	65,765
Bruce	58,355	56,982	56,610	57,405	57,950	58,486	58,608	59,120	58,551	59,199
Grey	66,094	65,508	64,339	65,534	66,278	64,775	65,494	65,524	65,717	65,193
Simcoe	73,799	73,110	74,183	73,446	73,926	74,103	73,235	73,172	70,206	70,047
Middlesex	89,426	87,636	88,032	87,799	87,782	87,842	88,107	88,182	87,907	88,909
Oxford	46,229	46,341	46,682	47,266	46,910	47,489	47,127	46,398	45,895	44,792
Brant	34,119	33,354	33,043	32,747	34,222	33,036	32,971	32,110	32,607	32,491
Perth	49,054	48,754	48,159	48,053	48,417	49,677	49,184	48,198	48,457	49,096
Wellington	56,078	55,988	55,609	54,969	56,017	56,780	56,466	57,812	58,356	59,035
Waterloo	49,320	48,621	47,901	47,553	48,349	48,429	48,027	47,492	46,052	45,052
Dufferin	21,745	21,424	20,687	19,509	20,159	21,036	21,552	21,355	20,600	19,606
Lincoln	29,329	28,841	28,507	28,386	28,826	29,069	29,836	30,010	30,013	30,036
Wentworth	75,302	75,041	74,251	73,579	75,141	74,185	73,781	73,138	71,928	71,201
Halton	19,922	19,733	20,091	20,345	20,208	20,630	21,052	20,911	20,700	21,072
Peel	21,689	21,779	21,848	22,311	22,180	22,482	22,746	22,952	23,443	23,551
York	234,208	232,128	224,816	226,631	226,303	221,778	213,672	194,736	182,557	174,946
Ontario	41,142	40,781	40,859	41,696	42,971	43,060	43,539	43,177	45,015	45,742
Durham	29,685	29,654	30,158	30,590	30,872	31,058	31,776	32,289	33,391	32,825
Northumberland	34,845	34,734	35,284	35,200	36,045	35,985	36,126	36,323	36,402	37,101
Prince Edward	17,613	17,555	16,961	16,843	17,241	17,230	17,278	17,473	17,632	18,153
Lennox and Addington	21,767	21,281	21,009	22,418	22,866	22,213	22,433	22,779	23,021	23,610
Frontenac	40,114	40,117	39,221	39,773	40,475	41,013	40,220	39,620	38,831	38,932

POPULATION.—*Concluded.*

Counties.	1895.	1894.	1893.	1892.	1891.	1890.	1889.	1888.	1887.	1886.
* Leeds	35,420	35,397	34,814	35,018	35,793	36,053	37,124	36,442	35,758	35,203
* Grenville	19,032	19,333	19,340	19,750	19,441	19,700	19,894	20,270	19,915	20,222
* Dundas	18,125	18,127	18,531	18,740	18,753	18,776	18,518	18,623	18,563	18,466
* Stormont	23,137	23,243	22,905	23,143	23,585	23,647	23,098	24,384	22,627	22,419
* Glengarry	20,121	19,035	19,894	19,565	20,113	19,803	20,309	19,492	20,100	19,751
* Prescott	22,951	22,518	22,325	21,596	20,654	21,428	21,325	20,401	20,040	20,998
* Russell	16,028	15,540	15,139	15,061	15,466	16,487	15,919	15,728	15,008	14,988
Carleton	80,157	77,923	75,678	74,334	73,282	73,073	74,101	74,211	69,966	68,544
Renfrew	44,895	43,630	41,884	41,551	41,731	41,317	41,054	39,940	37,917	37,659
Lanark	35,659	35,017	34,902	34,637	35,274	34,617	35,827	36,171	36,241	34,149
Victoria	29,893	29,665	29,478	29,626	30,153	30,626	30,077	29,883	30,181	30,409
Peterborough	34,052	33,764	33,352	32,863	32,364	31,552	31,215	31,096	30,823	30,439
Haliburton	5,975	5,758	5,718	5,487	5,767	5,670	6,045	5,770	5,573	5,389
Hastings	55,777	55,779	54,608	55,424	54,906	54,651	54,233	54,373	54,594	51,933
†Muskoka	16,663	15,815	15,373	15,042	14,590	14,698	14,371	14,017	13,656	14,003
†Parry Sound	13,778	12,620	11,584	11,744	12,739	11,374	9,426	8,763	6,290	6,236
†Nipissing	11,319	11,185	10,449	9,838	8,943	8,865	6,269	5,810	4,700	2,472
†Manitoulin	5,484	5,486	5,097	5,632	5,678	5,537	5,275	5,206	5,216	5,012
†Algoma	9,661	8,643	8,654	7,359	7,035	5,362	4,809	3,880	2,896	2 662
†Thunder Bay	5,575	5,548	5,840	5,205	4,488	5,563	6,909	6,125	6,194	5,764
†Rainy River	3,836	4,040	3,704	3,288	3,068	2,256	2,117	1,690	951	1,014
The Province:										
Townships	1,109,631	1,103,828	1,096,984	1,102,467	1,116,347	1,118,252	1,130,060	1,133,046	1,140,138	1,148,856
‡Towns	295,523	292,094	287,423	286,759	284,111	410,530	400,890	393,461	377,389	360,005
Villages	136,021	131,487	127,987	126,637	126,434					
‡Cities	416,215	408,810	397,665	393,664	395,229	388,762	375,951	353,638	330,930	319,634
Grand Total	1,957,390	1,936,219	1,910,059	1,909,527	1,922,121	1,917,544	1,906,901	1,880,145	1,848,457	1,828,495

* United counties. † No county organization. ‡ In this summary the totals throughout are for the municipalities as constituted in 1895.

NOTE.—For population of cities and towns separated from counties, see page 36.

ASSESSMENT ROLL—STEAM BOILERS.

TABLE VII. Showing the number of steam boilers as placed on the assessment rolls in townships, towns, villages and cities of the Province for the years 1891, 1892, 1893, 1894 and 1895.

—	1895.			1894.			Total.		
	Townships.	Towns and Villages.	Total.	Townships.	Towns and Villages.	Total.	1893.	1892	1891.
Counties :									
Essex	136	59	195	147	62	209	196	204	165
Kent	153	80	233	168	102	270	269	247	158
Elgin	125	44	169	126	41	167	160	156	140
Norfolk	84	35	119	87	27	114	130	101	93
Haldimand	87	18	105	92	20	112	106	101	83
Welland	56	30	86	57	26	83	74	79	63
Lambton	297	207	504	334	199	533	548	471	421
Huron	210	104	314	199	100	299	276	289	277
Bruce	174	86	260	153	79	232	254	237	207
Grey	183	57	240	156	52	208	179	158	153
Simcoe	222	136	358	210	139	349	337	312	221
Middlesex	201	66	267	178	58	236	227	232	217
Oxford	154	71	225	142	65	207	207	227	220
Brant	58	8	66	54	8	62	49	43	48
Perth	120	40	160	119	43	162	163	149	136
Wellington	109	62	171	114	60	174	169	169	157
Waterloo	88	149	237	94	144	238	217	187	195
Dufferin	54	23	77	56	23	79	70	69	84
Lincoln	72	32	104	69	31	100	83	95	73
Wentworth	89	31	120	90	32	122	114	112	102
Halton	44	37	81	46	39	85	79	86	87
Peel	60	16	76	68	17	85	69	63	55
York	127	81	208	132	79	211	189	177	164
Ontario	121	56	177	107	59	166	193	162	153
Durham	59	32	91	69	32	92	93	103	78
Northumberland	80	31	120	80	30	110	111	88	65
Prince Edward	61	18	79	65	15	80	78	79	84
Lennox and Addington	66	15	81	60	16	76	68	80	75
Frontenac	69	4	73	59	4	63	60	53	51
Leeds	109	55	164	97	38	135	139	135	133
Grenville	37	30	67	37	29	66	59	60	60
Dundas	65	18	83	58	18	76	71	70	65
Stormont	56	31	87	57	35	92	81	76	78
Glengarry	50	14	64	44	14	58	44	63	62
Prescott	73	9	82	76	11	87	78	69	59
Russell	41	24	65	27	25	52	52	40	36
Carleton	44	7	51	52	6	58	52	39	40
Renfrew	97	52	149	92	55	147	114	101	62
Lanark	64	62	126	61	66	127	105	115	89
Victoria	54	44	98	63	38	101	101	92	47
Peterborough	49	36	85	54	35	89	90	82	80
Haliburton	13		13	13		13	11	5	7
Hastings	157	56	213	123	87	210	232	214	143
Muskoka	48	47	95	50	41	91	68	83	40
Parry Sound	47	23	70	40	27	72	68	60	45
Nipissing	18	14	32	19	6	25	23	18	12
Manitoulin	8	7	15	11	8	19	15	16	12
Algoma	16	54	70	18	67	85	47	49	20
Cities :									
Belleville		33	33		30	30	29	20	
Brantford		69	69		78	78	78	48	39
Chatham		32	32		72	72	30	29	20
Guelph		36	36		30	30	31	29	28
Hamilton		225	225		528	528	201	202	182
Kingston		56	56		60	60	65	59	54
London		93	93		93	93	107	107	87
Ottawa		65	65		60	60	54	54	
St. Catharines		29	29		30	30	30	22	25
St. Thomas		17	17		53	53	53	27	
Stratford		52	52		48	48	47	55	
Toronto		240	240		184	184	184	135	118
Windsor		13	13		14	14	15	22	20
Total	4,414	3,169	7,583	4,319	3,488	7,807	7,127	6,732	5,662

FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.

TABLE VII. Showing an abstract statement of the Receipts, Disbursements, Assets and Liabilities of the township municipalities in the Province of Ontario, for the year ending December 31st, 1894

Municipalities.	Receipts								Disbursements.								
	Municipal assessment taxes.	Licenses, fees, rents, etc.	Refund of moneys expended for other municipalities.	Received for sundry municipal purposes.	Borrowed on debentures.	Borrowed for other purposes.	Miscellaneous.*	Total receipts.	Allowances, salaries and commissions.	Other expenses of Municipal government.	Roads and bridges.	Buildings and other works.	Support of the poor and other charities.	County treasurer's levy.	Payments to account of schools and education.	Drainage work.	Sinking fund and other investments.	Debentures redeemed.
ESSEX:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	
Anderdon	9,195	66		1,755		150	1,048	12,216	606	125	1,934		75	1,578	3,401	1,020		1,034
Colchester, N	17,663	1	22	8,000	600	3,961	3,210	32,857	738	197	1,345		167	1,611	3,707	5,070		7,316
Colchester, S	21,618	83	46	5,000		400	2,031	29,178	639	1,257	2,628	284	68	2,245	5,239	7,323		1,565
Gosfield, N	14,722	10	20	1,000		1,011	3,821	20,584	681	333	1,251	2	148	3,130	2,879	2,774		7,331
Gosfield, S	15,362	95				4,500	657	20,603	619	223	1,492		173	2,272	3,883	4,731		2,740
Maidstone	15,180	123	8	5,000		3,816	2,511	28,638	1,110	759	3,599		333	2,126	4,971	7,382		3,140
Malden	7,501	83		3,050			148	10,785	510	123	2,322		18	1,608	1,120			592
Mersea	16,807	110				19,700	4,135	40,252	1,259	359	2,059		300	5,432	5,246	11,129		5,242
Pelee Island	6,411	50		1,600		3,000	1,256	12,317	648	99	433			126	1,998	4,822		1,123
Rochester	17,147	141		3,600		1,377	469	22,737	1,070	1,092	1,867		151	3,553	3,522	1,619		2,931
Sandwich, E	12,484	408		4,800		500	4,208	22,400	750	279	945		357	1,788	1,000	2,352		5,892
Sandwich, S	11,063	5		4,433		2,773	329	18,603	640	133	1,546		34	1,546	2,190	6,105		
Sandwich, W	10,101	294				1,426	38	11,859	849	197	1,761		105	1,607	3,717	986		2,219
Tilbury, N	11,610	100				1,386	1,460	14,556	750	487	1,789		153	1,670	2,732	1,269		318
Tilbury, W	12,614	322		2,500	1,550	1,071	2,634	20,691	1,016	444	2,106		73	1,226	1,349	2,567		4,481
Totals	198,583	1,894	96	40,738	2,150	47,071	27,949	318,281	11,885	6,067	27,065	286	2,155	28,270	52,904	59,840		48,924
KENT:																		
Camden	14,202	48		3,643		7,657	706	26,256	302	321	1,892		222	3,528	4,767	7,486		3,123
Chatham	54,322	67		30,241		7,673	3,273	92,466	2,187	988	2,026		621	8,727	8,460	31,122		17,622
Dover	20,840	136	11	10,174		9,148	1,408	41,387	1,463	363	726		501	1,525	5,511	9,462		8,048
Harwich	38,944	206	30	10,000		3,928	2,527	55,635	1,800	511	3,612		732	12,557	9,364	9,434		6,107
Howard	24,402	68		5,600		1,513	1,766	33,339	1,106	1,007	3,168		291	4,166	5,907	2,807		4,992
Orford	15,221	99		3,000		1,944	3,005	24,269	648	299	2,322		403	1,343	1,046	2,209		2,471
Raleigh	32,847	15	164			4,716	2,114	39,856	1,087	1,048	1,997		434	5,518	6,883	10,096		6,737
Romney	7,084		35	1,425	1,000		5,771	15,315	200	346	564		10	1,241	3,531	801		3,671
Tilbury, E	30,466		276			12,299	2,362	45,392	1,207	396	2,786		473	2,763	4,651	5,006	275	10,578
Zone	8,652	11	61	3,662		1,234	693	14,313	505	282	603		190	1,102	1,693	1,587		3,152
Totals	243,550	630	576	67,745	1,000	50,112	23,645	387,228	10,506	5,561	19,695		3,877	42,870	55,313	80,099	275	66,134

* Including Drainage and Loans

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Disbursements—*Continued.*				Assets.						Liabilities.							
	Retired or money borrowed for current expenses.	Interest on loans and rates and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	*Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
ESSEX:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Anderdon	1,325	541	450	12,000	117	9,086	.....	.....	128	9,331	1,157	3,380	.....	300	4,365	3,050	329	12,501
Colchester, N.	7,000	2,778	448	30,167	2,800	19,729	.....	1,000	2,079	25,498	168	3,278	.....	3,300	38,284	2,500	2,398	49,928
Colchester, S.	.....	2,219	805	27,361	1,846	18,172	.....	17,206	3,619	40,833	1,664	3,902	15,434	1,647	36,745	5,000	.....	64,140
Gosfield, N.	.....	1,109	678	20,491	183	8,585	.....	2,000	3,762	14,331	1,189	.....	.....	991	17,697	1,000	460	21,377
Gosfield, S.	634	1,276	1,586	19,841	767	8,765	.....	.....	166	9,698	808	102	11,306	163	13,489	.....	3,150	29,018
Maidstone	1,936	849	651	27,387	1,051	13,491	.....	6,800	1,535	23,097	1,433	2,433	.....	899	14,574	5,000	.....	24,339
Malden	2,805	179	917	10,219	586	5,829	.....	1,000	40	7,405	1,135	1,134	.....	422	1,264	3,444	63	7,462
Mersea	1,475	1,500	816	34,941	5,321	15,671	.....	3,200	1,938	26,110	2,371	116	10,962	566	21,377	.....	.....	44,442
Pelee Island	1,050	1,474	78	11,347	770	3,070	.....	9,250	.....	13,190	140	424	.....	1,682	25,147	670	118	28,221
Rochester	4,744	1,077	1,076	19,847	2,850	13,907	.....	1,400	.....	18,207	1,175	.....	.....	392	10,841	3,600	1,164	17,172
Sandwich, E.	3,211	1,488	600	21,980	434	11,384	.....	200	2,364	14,362	1,541	3,299	.....	1,400	14,872	4,840	.....	26,042
Sandwich, S.	2,400	74	2,849	15,546	1,208	7,843	.....	6,975	6,560	22,676	982	2,118	.....	.....	.....	2,773	4,453	10,326
Sandwich, W.	.....	360	57	14,555	4	286	.....	.....	.....	290	.....	.....	.....	.....	6,703	.....	.....	6,703
Tilbury, N.	1,000	749	401	10,900	3,656	9,800	.....	.....	81	13,497	1,116	2,416	.....	211	1,866	4,000	6,755	16,373
Tilbury, W.	400	1,564	466	18,927	3,664	9,636	.....	2,500	1,796	15,995	.....	.....	4,334	6,764	34,546	2,000	.....	45,644
Totals	28,188	17,089	11,631	294,294	25,987	155,174	.....	51,651	24,018	254,830	15,429	23,202	42,036	18,777	250,814	39,166	14,377	403,798
KENT:																		
Camden	3,884	707	599	28,141	115	14,386	.....	1,000	84	15,585	3,094	2,079	.....	.....	18,578	3,97	1,047	28,370
Chatham	11,000	6,151	1,870	69,455	.....	41,007	.....	2,500	21,629	69,136	8,456	1,887	.....	2,500	78,865	30,241	663	122,162
Dover	8,191	3,252	1,347	41,942	340	21,524	.....	.....	5,000	27,258	5,129	791	.....	2,110	82,441	10,174	480	74,044
Harwich	8,881	1,844	767	51,893	770	8,218	.....	1,450	3,501	14,109	3,757	.....	.....	1,066	22,963	2,000	2,770	31,983
Howard	5,000	609	616	20,750	2,500	5,812	.....	1,500	4,871	14,782	4,36	443	.....	300	1,500	.....	923	10,929
Orford	1,800	1,004	221	10,554	6,213	8,285	.....	.....	650	16,255	2,388	2,043	.....	5,500	5,908	4,484	1,520	25,844
Raleigh	.....	1,800	215	21,791	3,852	8,800	.....	1,000	33,436	47,187	.....	.....	2,251	3,727	24,736	.....	11,976	44,779
Ramsay	9,819	1,640	60	14,008	1,257	2,865	.....	5,300	.....	14,620	1,027	1,031	9,850	1,756	20,116	.....	143	33,943
Tilbury, E.	8,000	4,163	73	40,480	4,400	27,371	340	6,000	1,011	39,098	.....	2,760	4,676	638	87,948	.....	1,261	97,20
Zone	3,500	500	97	12,307	1,316	5,531	.....	4,000	.....	10,847	953	556	.....	.....	4,000	4,423	.....	10,022
Totals	69,475	21,693	6,015	365,916	27,813	155,308	340	22,950	79,341	270,922	39,189	11,590	23,877	17,672	326,664	51,891	20,661	484,347

*The collectors' rolls are required for school property. It is included here when given, but the information received is very incomplete.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Receipts.								Disbursements.								
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Buildings and other works.	Support of the poor and other charities.	County treasurer for levy.	Payments on account of schools and education.	Drainage work.	Sinking fund and other investments.	Debentures redeemed.
ELGIN:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Aldborough	25,339	555	77	16,935		2,696	1,930	47,532	1,016	441	4,760		83	4,000	9,942	3,325	3,655	2,580
Bayham	14,458	220	83			700	1,805	16,766	1,002	318	6,719		186		5,575	776		927
Dorchester, S.	13,341	2	35	3,722			1,613	18,713	648	1,742	1,151			4,159	4,855	108		
Dunwich	19,972	95					1,301	21,368	1,152	391	5,234		81	4,933	5,959	128		1,304
Malahide	23,585	142	14	6,146			460	30,347	1,091	915	4,796		67	7,126	8,201	146		1,052
Southwold	25,893	226	33	3,000		200	1,304	30,656	997	353	5,495	15	17	3,191	8,272	200		1,340
Yarmouth	27,739	223	32	9,201		900	10,821	48,916	1,112	1,799	8,922		167	8,893	8,614	893		1,529
Totals	150,327	1,463	274	39,004		4,496	18,734	214,298	7,018	5,959	37,077	15	601	32,302	51,418	5,576	3,655	8,732
NORFOLK:																		
Charlotteville	10,464	72	399	330				11,265	660	239	840		75	1,437	4,754	93	399	
Houghton	4,732	19		239			12	5,002	493	246	724		2	628	2,112	52		200
Middleton	10,054	90	11	800			348	11,303	789	238	1,740		97	2,008	3,431	400		275
Townsend	15,312	12		1,900			4,282	21,506	907	272	1,312		15	4,742	8,084			68
Walsingham N.	6,249	27					938	7,214	392	342	2,131		26	826	2,655			300
Walsingham S.	10,395	32					385	10,812	479	450	1,088		20	1,376	3,490			1,622
Windham	16,016	81		200			657	16,954	695	756	1,399	20	118	3,329	6,689	1,815		
Woodhouse	9,568	30	27	2,200			1,717	13,542	553	253	2,759		229	2,317	3,787			1,000
Totals	82,790	363	437	5,669			8,339	97,598	4,968	2,796	11,993	20	582	16,663	35,002	2,360	399	3,465
HALDIMAND:																		
Canborough	3,498	29					405	3,932	256	596	219			1,139	1,110			
Cayuga N.	6,211	115	23	505	*800		544	8,198	342	58	888		64	2,010	3,334			400
Cayuga S	2,763	8					115	2,886	129	29	101			927	1,347			
Dunn	3,318	83					549	3,980	265	92	264		132	1,077	1,550	79		
Moulton	6,980	14	1,228	1,497			708	10,427	381	204	771		108	1,051	3,259	951	1,073	900
Oneida	7,790	3		800			262	8,855	432	163	706		165	2,003	3,119			
Rainham	4,747	188	964				700	6,599	366	84	274		290	2,020	2,456		707	
Seneca	8,221	156	5	625			413	9,420	482	176	924		330	2,514	3,776			

*Issued in 1893, but omitted from return of receipts and disbursements.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Disbursements—*Continued.*				Assets.						Liabilities.							
	Refund of moneys borrowed for current expenses.	Interest on loans, ad vances and debentures	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
ELGIN:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Aldborough	13,636	2,585	555	46,578	954	19,567	7,822	2,950	§5,299	36,592	7,024	.....	.....	18,580	13,174	‖ 18,549	1,489	58,816
Bayham	.....	185	267	15,955	814	4,356	.....	6,300	101	11,465	3,630	243	.....	.....	3,373	.....	467	7,713
Dorchester, S.	5,470	245	62	18,420	203	.....	.....	10,700	99	11,002	.....	.....	.....	.....	.....	1,472	18	1,490
Dunwich	.....	494	370	20,046	1,322	4,646	.....	250	240	6,458	5,391	140	.....	4,017	*9,565	.....	248	19,361
Malahide	6,000	589	414	30,347	...	1,164	.....	.....	.....	1,164	.....	200	.....	.....	9,163	146	240	9,749
Southwold	8,000	482	663	23,955	6,691	4,722	.....	1,000	140	12,360	7,773	517	.....	3,800	6,304	.....	100	18,494
Yarmouth	9,201	351	351	41,852	7,084	1,017	.....	1,275	30	10,006	8,249	.....	.....	311	2,896	.....	1,186	12,633
Totals	37,287	4,881	2,622	197,143	17,155	35,870	7,822	22,375	5,915	89,137	32,058	1,100	.....	26,708	44,475	20,167	3,748	128,256
NORFOLK:																		
Charlotteville	499	4	213	9,218	2,652	4,645	9,163	1,000	.....	16,860	2,434	1,046	15,885	.....	.....	.....	948	20,313
Houghton	265	28	251	5,092	..	2,701	.....	1,300	400	4,051	719	902	.....	400	.....	39	...	2,060
Middleton	880	217	240	10,355	908	1,802	.....	1,100	3,122	6,932	.....	4	.....	2,800	.....	.....	1,155	3,959
Townsend	1,000	86	†3,915	21,299	207	774	.....	2,000	4,308	7,289	.....	1,067	.....	1,368	.....	.....	.....	2,435
Walsingham N	.....	54	66	6,794	422	4,654	.....	1,105	.....	6,181	1,238	1,657	.....	500	.....	.....	.....	3,495
Walsingham S	278	1,580	139	10,472	340	5,208	.....	1,500	.....	7,048	1,600	1,172	30,148	.....	.....	.....	.....	32,920
Windham	1,200	103	119	16,243	711	1,513	.....	1,150	1,227	5,091	.....	3	.....	.....	.....	.....	25	28
Woodhouse	1,000	381	199	12,478	1,064	214	..	.....	1,056	2,334	.....	.....	5,000	.....	.....	1,200	....	6,200
Totals	5,893	2,462	5,231	91,834	5,764	21,561	9,163	9,755	10,113	56,356	6,091	5,851	51,033	5,068	.....	1,239	2,128	71,410
HALDIMAND:																		
Canboro'	.....	.....	31	3,251	581	293	.....	.....	.....	874	.....	26	.....	.....	.....	.....	.....	26
Cayuga N	665	53	240	7,894	304	.....	.....	.....	.....	304	.....	.....	.....	400	.....	.....	.....	400
Cayuga S	.....	.....	53	2,068	320	10	...	1,220	.....	1,550	.....	.....	.....	.....	.....	.....	.....	.....
Dunn	.....	.....	34	3,491	489	.....	.....	.....	.....	489	.....	.....	.....	.....	.....	.....	.....	.....
Moulton	1,185	224	299	10,477	...	312	5,288	.....	.....	5,600	.....	.....	.....	.....	900	‡2,061	.....	2,961
Oneida	800	27	212	7,927	1,228	.....	.....	7,500	.....	8,728	.....	.....	.....	.....	.....	.....	.....	.....
Rainham	.....	.....	102	6,139	270	4	4,647	600	.....	5,521	.....	.....	.....	.....	.....	.....	.....	.....
Seneca	625	13	229	9,029	321	18	.....	1,101	.....	1,440	.....	.....	.....	.....	.....	.....	.....	.....

*Including $2,480 transferred from Aldborough. †Including $2,911 in hands of ex-treasurer. ‡Due to municipal loan fund for drains.
§Including $2,737 judgment against ex-collector. ‖ Including $5,188 due sinking fund.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Receipts.								Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.*	Total receipts.	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Buildings and other works.	Support of the poor and other charities.	County treasurer for levy.	Payments on account of schools and education.	Drainage work.	Sinking fund and other investments	Debentures redeemed.
HALDIMAND.—*Con*	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$		$
Sherbrooke	1,283	7	730	459	.....	.....	162	2 641	103	68	66	..	83	368	834	.....	617	.....
Walpole.....	18 127	176	48	1,1-2	.....	.....	2,385	21,918	871	332	2,804	23	514	5,150	7,825	.....	.....	600
Totals	62,968	779	2,998	5,068	800	.....	6,243	78,856	3,627	1,802	7,017	23	1,686	18.259	28,611	1.030	2,397	1,900
WELLAND:																		
Bertie.....	11,268	845	...	3 0	....	.....	2,882	15,295	678	336	1,990	422	61	4,112	4,151	25	.....	438
Crowland	5.146	36	...	300	.....	.....	136	5,618	260	151	685	.....	2	1,393	2.566	..	.....	.....
Humberstone ..	10,466	292	...	.....	.....	.....	1,005	11,763	601	327	736	.....	25	2.087	4,955	781	.....	993
Pelham	7,810	15	3,688	213	....	.....	253	11,485	510	234	922	.....	.....	3,630	4,466	.....	2,199	.....
Stamford	8,096	308	.....	.....	...	.....	4,588	12 992	476	501	990	....	53	2,323	4,000	.....	1,500	254
Thorold	7,458	160	.....	.....	....	.....	102	7,660	104	154	686	.....	16	2,268	2,608	.....	.....	.....
Wainfleet ...	9.642	8	1,500	20	....	1,570	318	13,058	654	336	1,397	...	18	1,591	4,844	2,339	.....	1,391
Willoughby	5,473	83	.....	20	....	329	50	5,9.5	294	86	603	.....	....	1,794	2,073	259	.....	268
Totals.....	65,359	1,687	5,188	859	....	1,899	9,334	84,326	3,977	2,125	8,009	422	175	19,798	29,663	3,895	3,699	3,347
LAMBTON:																		
Bosanquet.....	16,779	2	7	4,499	.....	231	965	22,483	729	240	2,686	....	35	3,617	4,134	683	.....	3,481
Brooke	20,075	102	...	11,551	..	3,760	3,722	39,208	761	1,113	4,131	.....	313	4.095	6,156	7,008	.....	7,094
Dawn	25,309	95	252	2,750	360	11,532	5,034	45,362	997	383	2,311	.....	175	4,730	6,345	13,758	.....	10,744
Enniskillen	31,159	93	.....	10,295	.....	2,700	5,763	50,010	1,990	2,180	7,779	.....	570	4,084	9.013	12,420	.....	5,218
Euphemia	12.118	126	.....	2,500	.....	7,043	2,774	24.561	586	6 614	5,014	..	52	2,048	4,231	345	.....	.....
Moore.....	29.490	463	.....	12,927	1,700	5,280	1,883	51,743	1,225	384	6,440	.....	506	4.307	8,650	9,288	.....	6 071
Plympton	20,565	127	.....	4,664	2,000	3,558	1,144	32.058	997	165	4,101	.....	463	4,978	9,008	2,766	.....	3,235
Sarnia	13,884	81	.....	6,601	.....	592	842	22,000	764	282	3 304	124	81	2,043	3,552	2,234	....	5,055
Sombra	21,525	339	3	.....	.....	4,904	1,926	28,697	945	354	2,826	.....	81	1,910	6,812	1,410	....	8,585
Warwick	17,470	45	.....	6,802	.....	1,180	3,661	29,158	895	248	5,206	.....	144	2,582	7,247	1,896	.....	895
Totals.....	208,462	1,473	262	62,589	4,000	40,780	27,714	345,280	9,889	11,963	43,798	124	2,420	34,394	65,148	51,698	.....	50,978

*Including balances from previous year, county road grants, premiums on debentures, receipts from other municipalities as share of debt, etc.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Disbursements.—*Continued.*				Assets.						Liabilities.							
	Refund of moneys borrowed for current expenses.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, &c.	Lands, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
HALDIMAND—*Con.*	$	$	$	$	$	$	$	$	$	$			$	$	$	$	$	$
Sherbrooke	450	...	...	2,588	43	126	1,725	600	...	2,565	...	...	...	...	...	...	...	...
Walpole	1,182	328	481	20,106	1,812	139	...	300	...	2,251	...	...	...	5,500	...	...	...	5,500
Tota's	4,756	670	1,719	73,488	5,598	913	11,731	11,329	...	29,632	...	26	...	5,900	900	2,061	...	8,887
WELLAND:																		
Bertie	300	432	961	13,700	2,089	3,019	...	4,872	...	10,030	204	2,825	...	8,145	...	...	...	11,174
Crowland	300	8	67	5,434	185	1,918	...	700	...	2,003	...	1,200	...	...	...	...	...	1,200
Humberstone	...	175	449	11,709	34	1,046	...	8,166	3,091	12,301	...	700	...	...	1,917	...	156	2,773
Pelham	...	...	34	11,577	...	1,625	17,075	4,100	473	23,704	737	...	...	...	219	...	...	956
Stamford	...	776	178	11,981	1,931	2,570	1,500	20,000	651	16,961	...	4,805	...	7,504	...	...	...	12,309
Thorold	...	...	50	6,044	1,116	3,690	...	...	45	4,851	1,050	2,384	...	...	...	...	455	4,789
Wainfleet	...	309	160	12,038	...	3,477	75,000	28,700	6,843	63,020	2,292	...	...	...	6,737	20	...	9,049
Willoughby	502	42	34	5,165	...	683	...	1,200	...	1,883	...	717	...	...	339	29	34	1,119
Totals	1,102	1,792	1,466	78,976	7,306	18,283	94,070	67,522	11,033	146,169	5,183	12,632	...	15,649	9,013	259	645	43,381
LAMBTON:																		
Bosanquet	5,400	705	715	22,485	...	161	...	...	10,140	10,302	...	...	...	986	8,642	499	...	10,127
Brooke	4,881	1,988	874	38,487	719	19,227	...	16,726	704	29,375	...	...	...	4,4 0	10,800	6,700	100	42 4 0
Dawn	1,000	1,800	1,207	43,016	1,752	28,470	...	10,000	21,472	61,789	...	5,828	...	2,000	32,906	2,700	6.6	44 9 6
Enniskillen	5,000	3,444	812	50,040	...	10,001	...	17,000	14,085	81,086	5,722	2,906	...	136	*36,781	5,265	1,586	49 4 9
Euphemia	4,000	257	707	24,891	767	9,388	...	...	314	8,979	...	...	...	...	11,013	...	...	1,043
Moore	12,000	1,154	600	53,730	187	20,000	...	600	31,207	69,491	1,200	6,962	...	2,100	41,403	7,591	2,172	64,724
Plympton	4,000	882	1,003	32,048	...	3,511	...	700	1,102	7,448	1,528	...	...	1,800	13,887	104	...	20,322
Sarnia	2,861	1,751	400	23,189	...	5,000	...	...	10,411	15,012	...	...	...	1,000	21,831	6,60	...	29,782
Sombra	...	2,848	449	25,000	1,712	19,170	...	175	47,301	78,108	2,374	4,299	9,550	2,8 5	50,500	...	...	71,309
Warwick	8,029	342	1,200	23,782	377	5,120	...	1,000	79	6,582	1,179	...	...	...	6,202	1 220	...	9,201
Totals	48,737	14,118	6,759	380,006	5,204	146,417	...	67,201	140,204	398,286	16,372	29,022	9,555	16,817	257,921	30,820	4,791	356,301

* Debentures reported in 1895 included 2,000 for pound purposes.

† Mostly advances for local improvements.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Receipts.								Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Buildings and other works.	Support of the poor and other charities.	County treasurer for levy.	Payments on account of schools and education.	Drainage work.	Sinking fund and other investments.	Debentures redeemed.
HURON:	$	$	$	$	$	$		$	$	$	$	$	$	$	$	$	$	$
Ashfield	15,564	210	5	1,945	.....	.....	2,691	20,415	794	231	4,338	....	600	4,031	5,528	.....	.....	394
Colborne	8,399	148	....	1,200	.....	.....	503	10,250	485	162	1,687	59	399	2,580	3,558	.....	.....	.....
Goderich	10,766	.....	.....	2,883	.....	.....	901	14,550	702	153	3,198	.....	391	3,907	3,709	18	.....	.....
Grey	13,464	150	..	1,800	.....	.....	1,496	16,910	720	413	2,026	.....	637	3,860	5,024	917	.....	891
Hay	15,745	168	334	1,460	2,000	.....	8,017	27,724	564	281	3,325	.....	231	3,741	7,977	6,990	.....	1,198
Howick	16,522	165	....	1,751	.....	.. ..	2,393	20,831	956	216	1,488	.....	335	4,702	6,864	35	660	167
Hullett	12,689	68	6,853	1,000	.....	*9,908	1,046	31,564	655	341	2,643	.....	231	4,116	4,595	5,796	12,000	.....
McKillop	10,692	380	826	.....	.....	.....	914	12,812	679	355	2,298	.....	146	3,895	4,089	136	.....	80
Morris	12,648	46	.....	1,900	.....	.....	1,884	16,478	716	344	2,470	.....	292	6,854	4,238	21	.....	100
Stanley	10,602	4	.....	800	800	.....	361	12,567	535	112	2,199	.....	88	3,502	5,003	.....	.....	186
Stephen	21,102	323	1,238	.....	.....	.....	11,152	33,815	830	196	3,954	.....	371	3,915	6,230	4,474	912	3,492
Tuckersmith	10,636	112	1,987	.....	.....	.....	1,862	14,597	748	142	2,466	.....	162	3,717	4,420	.....	170	1,356
Turnberry	7,191	23	49	.....	.....	.....	4,828	12,091	690	157	935	.....	18	2,280	3,326	42	....	1,259
Usborne	10,718	77	.....	400	.....	.....	4,724	15,919	626	123	1,383	.....	215	3,925	4,537	.....	.....	.....
Wawanosh E	7,563	33	24	750	.....	.....	3,006	11,376	460	151	1,561	.....	37	2,571	3,232	39	.....	.....
Wawanosh W	8,836	28	.....	500	.....	.....	688	10,052	575	249	1,615	.....	94	2,881	3,428	.....	.....	.....
Totals	193,137	1,935	11,316	16,389	2,800	9,908	46,466	281,951	10,735	3,626	38,086	59	4,197	60,477	75,758	18,468	13,742	9,123
BRUCE:																		
Albemarle	5,149	26	416	1,600	.....	.....	960	8,151	358	405	774	.....	.....	923	1,354	.....	1,284	370
Amabel	11,166	115	578	175	.....	.....	3,800	15,834	593	271	1,561	.....	....	1,043	4,837	.....	2,397	476
Arran	10,445	145	1,774	.....	.....	.....	5,476	17,840	741	250	1,585	.....	236	2,805	3,913	.....	2,367	225
Brant	15,899	216	4,825	.....	.....	.....	3,502	24,442	703	384	5,326	52	270	3,874	6,066	.....	4,150	540
Bruce	10,909	98	.....	1,000	1,600	.....	1,693	15,300	567	231	2,884	.....	235	3,200	6,184	.....	213	.. ....
Carrick	13,170	395	47	.....	.....	.....	1,382	14,994	598	372	1,051	.....	142	3,468	7,476	.....	400	.....
Culross	11,187	166	192	.....	.....	.....	1,331	12,816	634	740	1,688	.....	289	2,749	4,893	30	174	.....
Eastnor	4,753	209	104	554	21	.....	657	6,298	359	103	827	.....	46	538	1,574	382	202	725
Elderslie	13,955	1	1,627	1,600	.....	.....	2,790	19,973	634	270	2,986	.....	338	2,838	5,000	.....	2,454	313

* Drainage.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Disbursements.—*Continued.*				Assets.						Liabilities.							
	Refund of moneys borrowed for current expenses.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
HURON:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Ashfield	1,945	213	201	18 275	2,110	2,457	.....	12,500	.....	17,037	3,876	.....	.....	3,034	.....	...	165	7,075
Colborne	1,200	41	78	10,249	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Goderich	2,400	63	9	14,550	....	21	.....	.....	18	39	.....	.....	.....	.....	.....	483	.....	483
Grey	1,200	512	182	16,382	528	257	.....	1,000	696	2,481	.....	.....	.....	.....	*6,625	1,400	80	8,105
Hay	1,460	596	621	26,984	740	207	.....	27,000	7,140	35,087	.....	.....	.....	3,221	11,439	.....	467	15,127
Howick	1,751	878	211	18,263	2,508	4,222	1,320	2,100	.....	10,210	4,581	.....	14,700	.....	378	600	492	20,811
Hullett	1,000	20	58	31,455	100	382	‡5,862	.....	.....	6,353	.....	.....	.....	.....	9,908	.....	§3,949	13,857
McKillop	.....	10	15	11,703	1,109	.....	14,582	.....	.....	15,691	.....	.....	.....	80	.....	.....	1,915	1,995
Morris	900	404	50	16,389	89	1,686	.....	.....	.....	1,775	3,452	.....	.....	.....	100	1,031	.....	4,583
Stanley	800	87	37	12,499	68	2,098	.....	550	.....	2,716	1,440	.....	.....	614	.....	.....	.....	2,054
Stephen	1,000	1,157	671	27,802	6,013	9,748	912	1,500	7,479	25,652	3,821	3,601	.....	.....	17,879	.....	.....	25,301
Tucker smith	.....	81	67	13,329	1,208	.....	16,984	11,500	.....	29,792	.....	.....	.....	.....	.....	.....	.....	.....
Turnberry	.....	95	77	8,879	3,212	77	.....	.....	.....	3,289	2,220	.....	.....	.....	637	.....	.....	2,867
Usborne	400	6	48	11,763	4,156	107	.....	425	.....	4,688	3,830	.....	.....	.....	.....	.....	.....	3,830
Wawanosh E	750	14	22	8,837	2,589	362	.....	.....	.....	2,951	2,194	.....	.....	.....	.....	.....	175	2,069
Wawanosh W	500	17	99	9,458	594	2,834	.....	8,762	100	12,290	2,813	.....	.....	.....	200	.....	226	3,239
Tota's	15,905	4,194	2,446	256,817	25,134	24,428	39,660	65,337	15,433	169,992	28,537	3,601	14,700	6,949	47,166	3,574	7,469	111,996
BRUCE:																		
Arkmarle	1,000	780	142	7,920	231	6,406	7,495	668	.....	14,710	132	1,349	10,000	900	.....	1,658	791	14,810
Amabel	.....	2,935	693	14,776	1,078	11,498	8,620	495	6,000	27 671	1,427	2,418	43,000	16,878	.....	175	.....	53,898
Arran	.....	2 718	371	15,211	2,629	4,120	35,782	400	2,351	45,282	.....	.....	45,000	200	.....	.....	689	45,889
Brant	.....	1,473	432	23 239	1,203	2,643	17,971	.....	.....	21,817	.....	.....	20,000	100	440	.....	8 7	21,197
Bruce	1,000	70	121	14 695	605	13	213	800	.....	1,631	.....	.....	.....	1,600	.....	.....	90	1,690
Carrick	.....	360	76	13 933	1,061	.....	1,464	1,650	.....	4,175	.....	.....	.....	3,200	4,000	.....	.....	7,200
Culross	.....	.....	27	11,164	1 642	549	.....	.....	317	2,518	.....	78	.....	.....	.....	.....	421	499
Eastnor	849	854	63	6 022	276	3,859	3,656	560	1,958	10 309	610	675	.....	2,750	11,985	1,204	1,072	18 296
Elderslie	1,699	2,781	153	19,370	653	.....	37,033	1,000	200	38,836	.....	.....	45,000	.....	1,039	.....	.....	46,039

*Including $543 omitted from Government Drainage Debentures in 1893. ‡Special deposit. †Including $253 omitted in 1893. §Drainage accounts.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Receipts.								Disbursements.								
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Buildings and other works.	Support of the poor and other charities.	County treasurer for levy.	Payments on account of schools and education.	Drainage work.	Sinking fund and other investments.	Debentures redeemed.
BRUCE—*Con.*	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Greenock	10,383	226	.....	500	.....	.....	145	11,264	642	213	2,026	.....	60	2,116	4,913	.....	.....	100
Huron	14,533	598	18	800	2,600	.....	2,978	21,522	810	240	4,636	.....	346	3,599	7,636	.....	.....	863
Kincardine	10,292	40	.....	2,085	....	.....	373	12,790	704	186	2,565	.....	175	1,806	4,867	.....	.....	155
Kinloss	8,291	111	.....	.....	.....	.....	1,697	10,099	568	87	1,178	.....	274	2,191	3,828	268	.....	100
Lindsay and St. Edmunds	2,941	....	.....	640	.....	.....	294	3,875	455	66	427	.....	.....	308	1,201	.....	60	.....
Saugeen	5,143	23	.....	.....	....	.....	1,764	6,930	490	144	1,161	.....	111	1,669	2,222	.....	.....	.....
Totals	148,216	2,119	9,581	8,954	4,221	.....	28,837	201,928	8,855	3,953	30,675	52	2,522	32,867	65,954	680	13,701	3,777
GREY:																		
Artemesia	11,503	1	1,048	.....	.....	.....	1,526	14,118	476	375	2,387	.....	255	2,565	5,278	.....	397	.....
Bentinck	18,641	244	2,468	458	.....	.....	2,826	24,637	684	622	2,806	.....	150	2,581	6,060	.....	3,490	275
Collingwood	15,491	85	3,336	4,965	700	.....	1,491	26,068	1,186	375	4,155	58	182	2,640	7,270	.....	3,547	79
Derby	7,485	59	.....	1,500	.....	.....	921	9,965	639	185	1,968	.....	86	1,343	2,884	193	.....	100
Egremont	12,501	71	7,846	.....	.....	.....	3,621	24,039	448	151	1,567	.....	175	2,424	4,670	.....	8,162	.....
Euphrasia	10,274	31	.....	.....	.....	.....	960	11,265	910	296	2,597	.....	15	2,165	4,810	.....	.....	100
Glenelg	7,353	93	1,013	475	600	.....	2,171	11,735	594	182	1,644	....	266	1,669	4,263	.....	1,599	130
Holland	6,887	168	22	.....	.....	.....	2,874	9,951	628	222	1,248	.....	43	1,810	3,676	.....	.....	497
Keppel	11,918	69	4,189	687	.....	8,000	†2,456	27,314	922	95	3,415	.....	402	1,475	3,640	3,347	4,295	1,016
Normanby	19,250	445	34,848	.....	.....	.....	2,629	57,172	896	198	2,608	.....	69	2,992	7,118	.....	17,048	20,000
Osprey	6,747	172	801	238	.....	.....	1,065	9,023	748	239	1,457	.....	143	1,825	4,404	.....	.....	.....
Proton	9,226	100	6	.....	.....	.....	7,675	17,097	784	208	4,378	.....	17	1,834	4,378	1,755	161	833
St Vincent	12,048	3	.....	638	.....	.....	3,405	16,094	911	838	1,715	.....	391	2,528	5,504	.....	.....	168
Sarawak	4,006	5	26	250	.....	‡7,500	1,357	13,144	465	122	937	.....	5	339	1,327	19	240	222
Sullivan	10,788	87	.....	.....	.....	.....	1,562	12,437	481	144	1,485	.....	132	2,249	6,063	.....	.....	.....
Sydenham	10,772	50	.....	.....	.....	.....	2,662	13,484	865	232	2,935	.....	41	2,301	5,059	.....	.....	516
Totals	174,885	1,683	55,673	9,211	1,300	15,500	*39,201	297,453	11,657	4,464	37,282	58	2,372	32,170	76,404	5,316	38,879	23,035

*Including county grants for roads and bridges $14,254. †Including $1,120 from Dominion re Indian roads. ‡Issued in 1891, but not reported in liabilities until 1894.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES—*Continued.*

Municipalities.	Disbursements—*Continued.*				Assets.						Liabilities.							
	Refund of moneys borrowed for current expenses.	Interest on loans, ad Values and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrear.	Investments in stock, debentures, &c.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
BRUCE—*Con.*	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Greenock	500	46	85	10,743	343	1,676	...	...	...	5,179	1,740	846	.....	800	.....	.....	25	3,400
Huron	810	23	130	10,0[illegible]	2,2[illegible]	697	.....	15,400	.....	18,336	.....	.....	.....	*3,797	.....	.....	.....	3,797
Kincardine	2,600	71	281	19,705	...	2,893	.....	495	.....	3,242	1,534	.....	.....	.....	.....	85	.....	1,619
Kinloss	.....	10	100	8,010	1,[illegible]	86	...	600	...	2,175	...	.....	.....	.....	100	.....	.....	100
Lindsay and St. Edmunds	400	102	542	5,[illegible]	311	1,344	150	...	...	4,798	...	.....	.....	200	.....	1,468	2,184	3,852
Saugeen	.....	.....	118	5,010	1,01[illegible]	50	...	.....	31	1,076	...	.....	.....	.....	.....	.....	10	10
Totals	8,249	12,[illegible]	3,310	187,0[illegible]	14,[illegible]	41,587	142,284	21,[illegible]	10,837	201,585	5,443	5,366	163,000	20,125	17,564	4,570	6,187	222,565
GREY :																		
Artemesia	.....	291	650	12,034	1,491	290	3,220	805	...	6,539	...	.....	.....	5,600	.....	.....	.....	5,600
Bentinck	440	3,9[illegible]	518	21,[illegible]	3,[illegible]	6,[illegible]	[illegible]	...	...	18,8[illegible]	2,003	...	65,000	275	.....	458	.....	67,736
Collingwood	5,[illegible]	644	590	16,[illegible]	[illegible]	816	3,[illegible]	1,500	912	6,8[illegible]	...	.....	.....	3,045	7,560	.....	654	11,259
Derby	1,500	78	90	9,074	89	81	...	80	864	2,[illegible]	.....	.....	.....	500	.....	.....	.....	500
Egremont	.....	3,000	685	2,[illegible]	2,[illegible]	...	46,328	...	...	48,[illegible]	.....	.....	60,000	.....	.....	.....	.....	60,000
Euphrasia	.....	36	217	10,[illegible]	1[illegible]	5,[illegible]	...	2,1[illegible]	238	7,977	2,158	1,034	.....	400	.....	.....	100	3,692
Glenelg	.....	1,[illegible]	446	11,[illegible]	...	4,[illegible]	15,[illegible]	1,000	500	21,[illegible]	...	.....	20,000	719	.....	475	.....	21,194
Holland	.....	22[illegible]	66	8,[illegible]	1,[illegible]	1,[illegible]	...	15	...	2,[illegible]	...	.....	.....	3,568	.....	.....	.....	3,568
Kenyon	2,917	2,[illegible]	†8,[illegible]	97,[illegible]	...	9,[illegible]	24,097	...	1,088	35,[illegible]	1,060	...	85,000	2,106	5,645	420	52	44,273
Normanby	.....	4,804	288	[illegible]	1,[illegible]	...	19,[illegible]	1,[illegible]	...	21,391	.....	.....	29,000	.....	.....	.....	.....	29,000
Osprey	.....	...	207	7,0[illegible]	...	3,[illegible]	...	...	...	3,[illegible]	1,425	234	.....	.....	.....	238	500	2,397
Proton	.....	4[illegible]	621	15,[illegible]	1,[illegible]	2,[illegible]	221	...	46[illegible]	4,[illegible]	[illegible]	...	.....	2,063	4,667	.....	85	7,295
St. Vincent	678	64	342	16,078	2,[illegible]	179	...	...	2,0	5,[illegible]	2,515	.....	.....	772	.....	.....	191	3,478
Sarawak	800	155	27,[illegible]	12,[illegible]	[illegible]	156	240	...	...	1,[illegible]	.....	.....	7,500	590	.....	250	.....	8,340
Sullivan	.....	...	113	10,[illegible]	1,[illegible]	72	.....	1,[illegible]	...	3,[illegible]	...	.....	.....	.....	.....	.....	.....	...
Sydenham	.....	112	207	12,[illegible]	1,[illegible]	1,[illegible]	...	15,[illegible]	...	18,044	...	.....	.....	1,239	.....	.....	.....	1,239
Totals	12,250	17,[illegible]	15,[illegible]	278,411	18,[illegible]	37,[illegible]	161,[illegible]	22,[illegible]	3,797	246,154	9,484	1,268	216,500	20,877	17,872	1,841	1,582	269,424

* Omitting $402 overstated in 1893. † Including railway bonus $8,000. ‡ Including railway bonus $7,500 issued in 1891, but omitted from treasurer's and auditors' reports until 1894.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Receipts.								Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Buildings and other works.	Support of the poor and other charities.	County treasurer for levy.	Payments on account of schools and education.	Drainage work.	Sinking fund and other investments.	Debentures redeemed.
SIMCOE:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Adjala	8,063	165	.....	1,000	.....	.....	358	9,586	710	120	865	.....	118	1,624	3,057	.....	.....	200
Essa	13,314	349	.....	1,999	.....	.....	1,056	16 709	915	476	2 882	.....	280	4,317	4,857	.....	.....	657
Flos	11,532	101	1,540	1,210	.....	*23,000	2,421	39 804	1,056	312	2,332	.....	79	1.804	5.003	53	595	25,530
Gwillimbury W.	9,109	59	....	.....	.....	.....	631	9,789	550	123	877	.....	248	2,669	4 529	.....	.....	.....
Innisfil	12,697	149	.....	.....	.....	.....	1,287	14,133	985	334	1,389	.....	365	3,768	5,671	.....	....	181
Matchedash	889	.....	67	.....	.....	.....	390	1,346	90	39	259	.....	.....	223	279	.....	.....	50
Medonte	11,524	312	.....	465	.....	.....	1,058	13,359	716	217	2,245	614	206	1,669	5 826	.....	.....	437
Nottawasaga	21,287	283	.....	1,000	.....	.....	4,798	27,368	1,512	460	3,684	.....	226	6,333	8,908	.....	.....	3,278
Orillia	7,765	40	10	700	1,900	.....	2,830	13,245	807	303	2.638	.....	32	907	5,592	.....	700	266
Oro	11,634	159	67	.....	.....	.....	1,100	12 960	719	355	1,534	....	164	3 350	5.019	.....	.....	527
Sunnidale	9,552	185	.....	2,000	.....	.....	1,569	13,306	789	5 2	1,298	.....	70	3,405	3,474	183	.....	320
Tay	11,577	127	.....	.....	.....	.....	254	11,958	489	232	1,473	.....	248	1.393	5,932	.....	.....	850
Tecumseth	14,395	179	.....	910	....	.....	1,743	17.227	758	410	2 162	.....	3 8	4,195	6,364	.....	.....	400
Tiny	13,416	72	2,421	1,775	....	†51,688	1,702	71.074	733	372	1,140	....	68	1 542	5,988	3,219	.....	50,088
Tossorontio	8,103	100	.....	1,600	.....	.....	1,852	11,555	411	114	4 2	19	...	4,391	3,066	.....	.....	700
Vespra	7,659	3	.....	1,113	1,000	.....	1,092	10,867	879	375	1,304	.....	108	1,335	5,627	.....	.....	150
Totals	172,416	2,283	4,105	13,763	2,900	74,688	24,141	294,296	12,149	4,764	26,494	633	2,520	42,925	79,172	3,455	1,295	83,637
MIDDLESEX:																		
Adelaide	12,513	50	.....	900	.....	.....	8 557	22,020	650	396	2,421	.....	....	4.660	4,181	58	.....	423
Biddulph	10,544	179	.....	1,358	....	.....	1,451	13,532	772	175	3,270	.. ..	3	2,855	4.118	.....	.....	60
Caradoc	22,259	93	.....	... .	800	1,566	5,919	28,637	887	533	2,900	450	19	5,825	6,956	2,198	....	1,685
Delaware	10,515	46	60	.....	.....	.....	174	10,795	442	247	1,387	.....	15	2,476	2,715	158	.....	689
Dorchester, N	18 043	166	369	5,200	.....	.....	6,335	30 053	841	1,450	7,749	.....	258	5,320	5.884	346	.....	430
Ekfrid	17 088	65	.....	550	1,900	1,984	297	21.884	781	370	3,247	.....	152	5.106	5,491	1,919	.....	3,147
Lobo	17.990	73	.. .	600	.....	.....	235	18,898	686	296	3,726	.....	129	5 809	5,095	156	.....	288
London	39.844	610	75	11,000	.....	.....	2,243	53,772	1,777	737	13.077	.....	342	12,866	9,669	.....	.....	78
McGillivray	15,963	39	.....	3,400	.....	.....	1,869	21,271	785	290	6,395	....	26	4,515	5,469	.....	.....	.....
Metcalfe	11,509	..	.....	1,000	....	1,000	1,673	15.242	577	127	1,965	.....	.....	3,268	3.000	1.264	.....	1,691
Mosa	12,069	.....	....	3,293	.....	1,098	405	16 865	702	133	2,427	.....	.....	3,651	3,610	1,719	.....	2,140
Nissouri, W	16,439	73	..	3,200	.....	.....	1,469	21,181	733	219	3,942	....	103	4,952	4,740	....	.....	563

*To retire railway debt.

†Including $48,000 to retire railway debt.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Disbursements—*Continued.*				Assets.						Liabilities.							
	Refund of moneys borrowed for current expenses	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
SIMCOE:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Adjala	1,000	110	120	7,933	1,653	1,805	..	..	..	3,458	1,581	683	425	..	800	..	..	3,489
Essa	1,963	284	143	16,709	..	746	..	..	33	779	496	..	2.5	2,243	..	87	100	3,250
Flos	1,000	2,002	82	39,804	..	9,908	752	41	150	10,941	1,494	2,401	23,000	7,597	..	1,210	25)	35,907
Gwillimbury, W	..	..	93	9,089	710	..	..	..	..	710	..	..	..	..	..	..	..	..
Innisfil	..	91	137	12,901	1,232	4,870	..	..	..	6,102	3,232	87	..	1,337	..	..	..	4,656
Matchedash	..	18	9	907	379	418	300	1,200	885	3,182	125	415	..	300	..	..	75	915
Medonte	200	202	173	12,505	864	4,639	..	13,100	..	18,593	1,681	..	..	3,233	..	2 5	35	5,215
Nottawasaga	1,000	1,015	229	26,646	722	10,806	..	..	..	11,528	5,839	1,639	4,660	1,707	..	1,000	..	14,785
Orillia	..	308	191	11,741	1,804	5,910	700	11,450	..	19,864	1,651	950	..	5 422	694	*709	..	8 847
Oro	..	137	109	11 914	1,046	5,491	..	1,000	27	7,474	2 773	..	..	1,751	..	..	..	4 524
Sunnidale	2,000	88	180	12 3 9	977	3,140	..	..	183	4,300	3,083	896	..	200	..	..	100	4 279
Tay	178	134	149	11 075	883	9,000	..	75	523	10,482	1,371	3,535	..	1,4 0	..	..	200	6,5 0
Tecumseth	910	62	94	15 653	1,564	..	..	..	270	1,834	..	..	..	450	..	..	..	4 0
Tiny	2,475	2,691	950	69,296	1,808	9,689	120	..	†6,116	17,743	..	3,821	48,000	928	3,689	..	15	56,53
Tosserontio	..	186	58	9,887	2,168	241	..	5,567	..	7,976	..	346	2,400	..	..	1,662	144	4,56
Vespra	1,000	48	41	10 867	..	2,981	..	800	..	3,781	1,879	569	..	1,300	..	113	131	3,992
Totals	11,666	7,369	2,717	278,796	15 500	69,644	1,882	33,233	8,187	128,446	21,607	15,342	78,650	28,017	5,183	5,037	1,135	157,971
MIDDLESEX:																		
Adelaide	1,200	72	261	15,022	6,998	..	..	1,500	76	8,514	4,446	..	..	..	..	..	260	4,706
Biddulph	2,200	20	68	13,631	1	6,227	..	800	..	7,028	2,789	158	..	60	..	2,208	..	5,215
Caradoc	1,440	518	264	25 765	4,872	5,192	..	2 800	..	12,864	4 6 6	480	..	3,998	7,628	..	..	16,732
Delaware	..	145	112	8 286	2,009	3,251	..	1,200	..	7,460	2,407	..	..	..	2,149	..	..	4 556
Dorchester, N	4,000	234	566	27,178	2,875	1,905	6,400	..	..	11,180	4,664	..	..	1,453	..	1,200	40	7,357
Ekfrid	611	652	241	21,711	173	8,808	..	700	349	10,030	4,925	..	..	2,443	11,335	..	95	18,798
Lobo	694	147	261	16,745	2,153	7,981	..	1,600	..	11,734	5,671	..	..	2,187	..	600	..	8 308
London	13,000	265	844	52,695	1,147	35,587	..	2,000	..	38,684	12,358	1,171	..	1,887	..	9,000	..	24,4 6
McGillivray	100	55	274	18,382	2,682	7 0	..	9,000	..	12,432	..	..	..	..	..	2,583	140	2,724
Metcalfe	1,000	267	351	13, 60	1,682	4,300	..	..	73	6,055	3,147	..	..	..	5 709	..	..	8,856
Mosa	1,000	421	995	16,768	97	10,000	..	..	109	10,266	3,825	..	..	1,100	7,7 7	2,448	326	15,3 6
Nissouri, W	200	56	140	15,047	5,534	3,942	..	..	..	9,476	5,685	..	..	838	3,084	..	..	9,607

*Due sinking fund. †Share of Penetanguishene in railway debt.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Receipts.								Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Buildings and other works.	Support of the poor and other charities.	County treasurer for levy.	Payments on account of schools and education.	Drainage work.	Sinking fund and other investments.	Debentures redeemed.
MIDDLESEX.—*Con.*	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Westminster ...	25,366	206	222	.....	1,200	.....	*17,289	44,283	1,124	362	6,387	.....	36	8,104	7,995	.....	.....	1,766
Williams, E....	14,281	37	.....	887	.....	.....	1,352	16,507	537	73	4,264	.....	9	4,199	3,138	32	.....	401
Williams, W ...	11,893	.....	.....	2,521	.....	.....	209	14,623	657	458	2,389	.....	176	3,000	5,618	62	.....	.....
Totals.....	256,316	1,577	726	33,839	3,900	5,708	47,477	349,563	11,950	5,836	64,937	450	1,368	76,576	77,729	7 912	.....	13,359
OXFORD:																		
Blandford.....	7,094	38	54	.....	.....	442	2,742	10 370	4 0	115	1,707	.....	.....	2,086	2,482	455	.....	551
Blenheim	21,286	*772	.....	1,992	.....	.....	2,636	26 686	1,0 6	343	5,46	.....	125	5,539	9,855	.....	.....	301
Dereham	20,404	582	460	218	.....	.....	1,74	22,778	1,229	279	3 883	.....	197	5 0 7	7,432	1,332	.....	506
Nissouri, E	10,919	60	.....	.....	.....	.....	547	11,526	464	184	1,810	.....	60	3,856	4,112	20	.....	.....
Norwich, N	11,803	24	2,440	1,000	.....	669	2,172	18,048	600	166	1,919	.....	123	2,840	4,110	1,649	.....	2 689
Norwich, S	9,370	17	76	.....	.....	.....	2,750	12,223	473	550	1,792	....	183	2,235	4,033	51	.....	268
Oxford, E.....	7,913	16	84	.....	.....	.....	4,6 9	12,6 2	582	69	1,6 8	.....	94	2,877	3,143	1,719	.....	5 6
Oxford, N.....	6,995	113	.....	500	.....	.....	992	8,600	494	143	2,856	.....	9	1,706	2,033	220	.....	190
Oxford, W ...	7.332	413	8	500	.....	.....	2,0 7	10,290	560	857	1,071	.....	39	2,167	3,173	20	.....	218
Zorra, E.....	22,605	33	1,105	2,473	.....	571	4,713	31,500	722	181	7,982	.....	223	5,240	6,302	2,068	1,079	2,631
Zorra, W.....	12,528	12	2,003	1,000	.....	.....	5,111	20,654	565	260	2,742	153	38	3,765	3,783	369	1,500	1,708
Totals.....	138,249	2,080	6,170	7,683	.....	1,622	†29,523	185,327	6,995	3,147	32,838	153	1,088	37,398	50,458	7,903	2,569	9,598
BRANT:																		
Brantford	22,164	73	4.654	3,236	.....	.....	645	30.772	2,046	496	5.760	.....	676	5,2 6	11,490	.....	1,100	283
Burford.....	17,877	34	560	400	.....	857	2,286	21,994	995	497	3,428	.....	762	4,151	7,384	1,761	.....	1,5 7
Dumfries, S....	14 074	147	95	800	.....	.....	1,124	16,240	8 6	154	1,740	.....	396	3,288	6,622	.....	.....	187
Oakland	2,956	4	278	.....	.....	.....	770	4 068	288	50	227	.....	107	697	1,261	.....	.....	400
Onondaga	5,9_9	40	.....	2,800	.....	2,000	1,077	11,846	479	112	3,775	.....	115	1,379	2,153	.....	.....	.....
Totals.....	63,000	298	5,587	7,236	.....	2,857	5,902	84,860	4,634	1,239	14,930	.....	2,056	14,731	28,910	1,761	1,100	2,507
PERTH:																		
Blanshard.....	12,867	87	.....	2,700	.....	.....	6 304	21,958	722	456	4,016	.....	96	4,517	4 305	.....	.....	580
Downie	13,369	128	.....	3,610	.....	.....	4,663	21,770	641	226	5,162	.....	175	5,045	4,384	.....	.....	.....
Easthope N	12.204	123	....	.....	.....	.....	3,100	15,427	61	522	2,141	...	145	3 7 9	3,417	.....	.....	1,560

* Including $478 for cow tags. ‡ This township carried a large balance on Dec. 31. † Including C. V. R. surplus from County.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Disbursements—*Continued.*				Assets.						Liabilities.							
	Refunds of moneys borrowed for current expenses.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Lands, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
Middlesex—*Con.*	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Westminster		618	1,500	57,[illegible]	14,[illegible]78	3,563	.....	.....	1,890	22,084	7,708	.....	.....	4,774	2,581	.....	1,[illegible]83	16,165
Williams, E	1,697	41	91	14,[illegible]2	2,[illegible]83	1,084	.....	350	40	7,562	4,080	.....	.....	.....	.....	.....	.....	4,080
Williams, W	2,[illegible]65	40	117	14,531	107	5,440	.....	5 0.0	282	10,774	2,726	47	.....	.....	.....	2,470	.....	5,243
Totals	39,687	3,410	5,808	3[illegible],0[illegible]2	49,5 1	102,773	6,400	24,950	2,709	186,378	68,957	1,856	.....	17,853	37,932	23,073	2,247	152,118
Oxford—																		
Blandford		181	273	8,2[illegible]	4,184	.....	.....	.....	.....	2,134	.....	.....	.....	.....	2,582	.....	.....	2,18[illegible]
Blenheim	1,[illegible]82	[illegible]55	654	[illegible],[illegible]8	1,[illegible]08	191	.....	1,100	.....	2,382	.....	.....	.....	4,723	.....	.....	.....	4,[illegible]73
Dereham	2,[illegible]2	47	[illegible]0	22,[illegible]78	.....	19	5,000	.....	3,916	8,935	.....	.....	.....	.....	3,461	2[illegible]	.....	3,[illegible]61
Nissouri, E	.....	.....	117	10,[illegible]3	[illegible]0	1,120	.....	.....	.....	2,203	.....	.....	.....	.....	.....	.....	.....	.....
Norwich, N	1,[illegible]0	[illegible]0	124	[illegible]4,[illegible]4	2,[illegible]0	138	.....	120	124	2,582	.....	.....	.....	.....	.....	.....	.....	.....
Norwich, S	.....	24	182	9,767	2,[illegible]0	5	127	2,[illegible]0	.....	4,898	.....	.....	.....	.....	824	.....	.....	824
Oxford, E	.....	30	[illegible]0	10,[illegible]3	2,[illegible]0	203	.....	800	716	3,849	.....	3	.....	1,154	281	.....	70	1,[illegible]27
Oxford, N	[illegible]0	40	58	[illegible],[illegible]0	[illegible]4	740	.....	.....	.....	1,[illegible]09	.....	.....	.....	.....	370	.....	.....	[illegible]70
Oxford, W	6[illegible]	20	48	[illegible],[illegible]3	1,[illegible]47	.....	.....	500	40	2,177	252	.....	.....	.....	.....	.....	.....	[illegible]52
Zorra, E	1,[illegible]5	413	1,[illegible]6	[illegible]0,[illegible]0	1,[illegible]76	9[illegible]	.....	825	1,913	4,[illegible]0	.....	.....	.....	.....	6,[illegible]70	600	[illegible]8	7,[illegible]8
Zorra, W	1,[illegible]81	2[illegible]0	[illegible]08	16,[illegible]0	1,[illegible]04	1,[illegible]08	[illegible]4,[illegible]41	150	.....	20,[illegible]3	.....	.....	.....	.....	6,[illegible]87	.....	.....	6,[illegible]87
Totals	[illegible],[illegible]87	1,[illegible]75	[illegible],7[illegible]	[illegible]97,[illegible]80	18,402	5,206	19,[illegible]68	5,495	6,729	55,[illegible]50	252	3	.....	5,877	21,780	818	653	29,[illegible]83
Peel—																		
Brampton	2,[illegible]40	[illegible]83	212	30,[illegible]72	.....	2,[illegible]84	[illegible]67,[illegible]20	.....	.....	69,[illegible]04	.....	.....	.....	8,[illegible]29	.....	3,[illegible]36	.....	12,[illegible]65
Chinguacousy	[illegible]00	[illegible]43	[illegible]20	21,[illegible]79	[illegible],[illegible]5	1,[illegible]68	8,[illegible]0	[illegible]00	.....	11,[illegible]53	.....	.....	.....	.....	5,[illegible]34	.....	.....	[illegible],[illegible]34
Esquesing, S	[illegible]0	[illegible]41	[illegible]47	14,[illegible]0	1,[illegible]40	.....	.....	.....	4[illegible]	1,[illegible]90	.....	.....	.....	.....	.....	.....	.....	.....
Caledon	.....	[illegible]0	71	[illegible],[illegible]6	[illegible]5	12	5,[illegible]0	2,[illegible]0	.....	8,[illegible]5	.....	.....	6,[illegible]0	.....	[illegible],[illegible]5	.....	.....	6,[illegible]0
Chinguacousy	2,[illegible]0	[illegible]8	[illegible]7	11,[illegible]0	[illegible]16	.....	.....	[illegible],[illegible]0	.....	[illegible],[illegible]6	.....	.....	.....	.....	2,[illegible]0	.....	.....	2,[illegible]0
Totals	[illegible],[illegible]40	[illegible],[illegible]72	[illegible],[illegible]0	[illegible]1,[illegible]8	[illegible],[illegible]6	[illegible],[illegible]93	[illegible]1,[illegible]50	6,[illegible]50	.....	94,[illegible]64	.....	.....	6,[illegible]0	16,[illegible]74	[illegible],[illegible]34	[illegible],[illegible]36	.....	[illegible]4,[illegible]44
Perth—																		
Blanshard	[illegible],[illegible]0	[illegible]0	[illegible]16	17,[illegible]6	[illegible],[illegible]5	[illegible]70	.....	[illegible]1,[illegible]80	[illegible]17	27,[illegible]20	[illegible],[illegible]13	.....	.....	[illegible],[illegible]5	.....	.....	[illegible]60	6,[illegible]96
Downie	[illegible],[illegible]0	[illegible]0	[illegible]1	[illegible]5,[illegible]3	[illegible],[illegible]7	[illegible]23	.....	[illegible]00	.....	[illegible],[illegible]0	[illegible],[illegible]58	.....	.....	.....	.....	.....	[illegible]16	[illegible],[illegible]74
Easthope N	.....	[illegible]8	[illegible]1	12,[illegible]2	[illegible],[illegible]0	2	.....	[illegible]80	1,685	[illegible],[illegible]42	.....	.....	.....	.....	7,[illegible]05	.....	.....	7,[illegible]05

[illegible]Sinking fund. the interest of which goes to schools. Many other municipalities hold such investments.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Receipts.								Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Buildings and other works.	Support of the poor and other charities.	County treasurer for levy.	Payments on account of schools and education.	Drainage work.	Sinking fund and other investments.	Debentures redeemed.
PERTH.—*Con.*	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Easthope S	8 345	204	.....	.....	...	.....	3,151	11,700	572	206	2,115	.....	120	2,305	2,823	946	.....	345
Ellice	16,162	.....	.....	3,227	1,000	.....	7 894	28,283	951	2.638	3,460	.....	155	1.517	4.564	3,564	.....	3,822
Ema	20,146	152	50	6,000	.....	475	1,198	28,021	796	1,586	3,451	.....	66	4,868	4 838	914	....	1.556
Fullarton	12,266	71	.....	4,000	.....	.....	427	16 767	570	111	4,699	.....	219	4.655	3,180	150	.....	.....
Hibbert	10,385	108	.....	1,000	....	.....	1,281	12 774	636	224	2.470	.....	13	3.733	3.277	.....	.....	220
Logan	15,678	63	30	1,500	....	.....	5,605	22.876	1,417	389	3.247	.....	29	3,709	3 568	.....	.....	2,276
Mornington	16,212	397	1,340	2,200	.....	.....	1,224	21,423	710	163	2,750	.....	196	3,725	4.778	45	2,940	200
Wallace...	13,144	61	96	.....	.....	.....	732	14,033	705	222	1,771	....	83	4,939	4,635	224	96	.....
Totals.....	150,778	1,397	1,516	24,287	1,000	475	35,679	215,032	8,369	6,743	35,262	.....	1,419	42,132	43,769	5,843	3,036	10,409
WELLINGTON:																		
Arthur	11.302	36	21	500	.....	315	1,748	13.922	879	165	1 869	.....	5	3,852	5,119	242	.....	.....
Eramosa	4,805	297	52	122	.....	.....	1,952	7.228	618	200	2.278	.....	.....	600	2.932	.....	.....	200
Erin	16,277	124	....	.....	....	.....	164	16 765	637	171	2,074	.....	8	7,343	5.829	.....	.....	270
Garafraxa W ..	10 757	15	27	.....	.....	.....	2,6 6	13.455	618	696	1,563	.....	8	5,399	3,924	.....	.....	122
Guelph	9,324	43	52	1,000	.....	.....	318	10 737	724	248	1,908	.....	5	3,955	3,408	.....	.....	.....
Luther W.....	8,653	28	103	1,400	.....	2,821	2 409	15,454	693	198	1,092	.....	2	.....	3.399	3,278	.....	618
Maryborough ..	15,255	86	6	500	.....	.....	5 (12	20.859	843	176	2.868	.....	34	4.510	6.278	.....	.....	297
Minto....	17,156	44	2,663	2,000	.....	.....	896	22.779	958	226	2,504	.....	28	4,280	4,997	.....	5,073	.....
Nichol	6,184	124	6	927	....	.....	2,280	10.321	898	187	1,476	.....	.....	4.062	2,158	.....	.....	.....
Peel	16,907	231	64	2,569	.....	.....	8,184	27,955	985	169	4,313	.....	.....	5 974	6,487	151	.....	317
Pilkington	7,047	30	.....	.....	.....	.....	660	7.677	541	125	1.339	.....	.....	2,362	2 385	.....	.....	.....
Puslinch	11,954	236	2,978	.....	.....	.....	451	15,619	782	532	1,650	382	15	4,588	5,077	5	2,002	.....
Totals..... ..	136,421	1,294	5,972	9,018	.....	3,136	26,710	182,551	9,256	3,093	24,924	382	105	46,925	51,993	3,676	7,075	1,824
WATERLOO:																		
Dumfries N	10,108	109	.....	1,000	.....	.....	147	11,364	588	350	924	.....	.....	3,060	4.254	.....	.....	579
Waterloo	26 883	395	14,368	4,200	.....	700	545	47 031	1,322	402	2,956	.....	88	5,858	12,810	700	12,700	2,091
Wellesley	15,574	524	815	748	.....	.....	2,142	19,803	948	367	4,014	... .	6	2,635	9,874	.....	763	.....

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Disbursements—*Continued.*				Assets.						Liabilities.							
	Refund of moneys borrowed for current expenses	Interest on loans, rebates and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
PERTH.—*Con.*	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Easthope S	.. ....	201	88	9,721	1,979	10	....	100	....	2,089	....	....	....	....	3,320	600	....	3,920
Ellice	8,297	1,594	3	2,304	2,979	6,824	.....	.....	1,483	11,286	3,400	....	....	900	†11,148	10,100	1,717	27,265
Elma	3,500	1,575	*2,803	25,753	2,268	1,946	.....	.....	389	3,703	4,383	....	14,200	1,000	10,896	2,500	.....	32,949
Fullarton	3,228	80	88	16,852	305	27	.....	860	.....	1,222	....	....	.....	.....	.....	1,000	....	1,000
Hibbert	1,000	40	88	11,843	931	....	.....	750	.....	1,681	....	....	.....	.....	440	.....	.....	440
Logan	1,500	437	676	17,248	5,458	1,000	.....	600	222	7,280	339	....	....	374	5,754	.....	297	6,764
Mornington	2,250	2,442	443	20,697	731	....	2,940	....	1,933	5,604	579	....	40,000	250	.....	.....	....	40,829
Wallace	.....	1,100	85	13,880	173	3,959	2,420	400	1	7,002	2,981	....	20,000	....	.....	.....	60	23,041
Total's	21,015	7,703	4,353	190,253	24,779	14,291	5,360	25,410	6,130	76,979	17,723	....	74,200	5,257	38,678	14,200	2,519	152,602
WELLINGTON:																		
Arthur	500	10	169	12,810	1,112	1,334	.....	1,025	....	3,471	724	638	.....	....	315	.....	100	1,777
Eramosa	.....	79	281	7,228	....	7,299	.....	.....	25	7,324	3,874	1,509	.....	600	.....	122	150	6,255
Erin	.....	52	90	16,464	111	6,814	.....	.....	135	7,060	4,581	....	.....	270	.....	.....	.....	4,851
Garafraxa W	.....	37	246	12,642	813	3,679	.....	.....	41	4,533	2,471	33	.....	.....	605	.....	231	3,340
Guelph	23	.....	250	10,541	216	7,941	14,000	.....	.....	22,127	3,846	....	.....	.....	.....	1,050	230	5,076
Luther W	1,740	379	147	11,506	3,858	1,691	100	400	2	5,491	2,436	....	.....	.....	11,641	.....	.....	14,077
Maryborough	900	32	98	15,756	5,123	1,841	.....	450	....	7,414	4,879	105	.....	100	.....	.....	182	4,766
Minto	1,500	1,548	690	21,803	956	6,457	13,436	600	540	21,999	650	5	25,000	.....	.....	1,000	....	26,655
Nichol	907	6	77	9,191	580	2,345	.....	.....	.....	2,885	2,705	....	.....	.....	.....	.....	178	2,953
Peel	2,500	244	42	21,341	6,604	57	.....	.....	.....	6,877	5,708	....	5,831	.....	.....	.....	74	11,703
Pilkington	250	51	184	7,340	537	1,460	.....	.....	.....	1,758	791	.....	.....	.....	.....	662	.....	1,453
Pushinch	.....	.....	95	15,128	491	2,729	11,023	3,000	.....	17,243	2,460	....	.....	.....	.....	.....	95	2,555
Total's	8,119	2,511	2,477	162,260	20,191	43,161	38,589	5,475	743	108,162	34,735	2,290	30,831	970	12,561	2,784	1,240	85,411
WATERLOO:																		
Dumfries N	1,000	85	187	11,048	306	1,643	.....	250	350	2,599	.....	.....	.....	250	267	.....	125	742
Waterloo	4,500	1,255	631	44,978	2,158	.....	26,470	1,000	.....	30,458	.....	.....	.....	2,580	18,637	.....	.....	21,217
Wellesley	....	.....	217	18,854	972	2,882	13,146	.....	.....	16,997	3,383	....	.....	.....	.....	1,010	.....	4,393

*Including $2,581 paid to Logan, Ellice & Grey for drains. †Omitting $3,615 for Corcoran drain, also in North Easthope debenture liabilities; and including $100 omitted in 1893 for C. B. C. drain.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Receipts.								Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Buildings and other works.	Support of the poor and other charities.	County treasurer for levy.	Payments on account of schools and education.	Drainage work.	Sinking fund and other investments.	Debentures redeemed.
WATERLOO.—*Con.*	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Wilmot	18,719	458	.....	1,500	1,800	.....	5,926	28,403	1,302	376	3,095	..	9	3,505	10,865	.....	..	232
Woolwich	17,262	227	1,138	.....	1,200	.....	3,214	23,031	1,057	394	2,989	..	....	3,911	8,639	.....	700	1,465
Totals	88,536	1,713	16,261	7,448	3,000	700	11,974	129,632	5,217	1,869	13,978	.....	103	18,969	46,442	700	14,163	4,367
DUFFERIN:																		
Amaranth	15,210	7	11	1,500	.....	829	89	17,646	558	1,019	1,296	.....	10	3,393	3,638	428	... ..	2,917
Garafraxa E	8,933	18	.....	1,300	.....	.... ..	634	10,885	434	360	1,518	. ....	2	2,344	3,381	.....	.....	280
Luther E	9,357	1	...	2,000	.....	.....	1,646	13,004	442	223	1,617	....	.....	1,403	3,805	636	.....	1,264
Melancthon	13,516	57	5	4,078	*2,200	....	53	19,904	708	222	2,069	....	4	3,475	6,103	.....	95	3,588
Mono	11,574	58	.. ..	2,000	.....	.....	720	14,352	625	155	2,460	....	40	2,835	5,348	.....	.....	.....
Mulmur	14,511	86	.....	1,200	.... .	.....	1,048	16,845	738	410	1,330	.... .	134	3,667	5,670	.....	100	400
Totals	73,101	227	16	12,073	2,200	829	4,190	92,636	3,505	2,389	10,230	.....	190	17,057	27,954	1,064	195	8,099
LINCOLN:																		
Caistor	7,118	5	.....	500	.....	.....	1,083	8,706	353	112	881	.	.....	2,819	2,833	.....	.....	.....
Clinton	10,781	..	....	1,000	.....	.....	306	12,087	441	132	981	....	.....	4,418	4,057	100	.....	118
Gainsboro'	10,665	24	.....	1,400	.....	....	206	12,255	423	149	2,439	...	.....	3,385	3,784	... ...	.....	310
Grantham	9,516	101	... .	400	.....	.....	55	10,072	667	273	1,277	....	.....	4,222	2,829	.....	....	.....
Grimsby N	7,455	.....	1	4,519	.....	.....	363	12,338	401	247	1,138	612	.....	2,704	1,853	.....	.....	.....
Grimsby S	6,355	120	10	.....	.. ...	.....	941	7,426	477	278	765	....	5	1,849	3,150	.....	.....	166
Louth	8,379	42	.....	.....	.....	.....	776	9,197	376	127	1,389	....	.....	2,079	3,126	.....	...	123
Niagara	7,486	165	.....	500	.....	.....	394	8,545	495	231	1,839	.....	.....	2,616	2,682	.....	.....	63
Totals	67,715	457	11	8,319	.... .	.....	4,124	80,626	3,636	1,549	10,639	612	5	23,592	24,314	100	....	813
WENTWORTH:																		
Ancaster	12,739	3,751	8,766	2,000	.....	.....	756	28,012	867	604	4,513	.. ..	750	2,384	7,466	.....	6,887	.....
Barton	6,354	123	1,497	.....	....	.....	3,798	11,772	1,019	264	2,478	.. ..	355	1,433	2,226	.....	770	... ...
Beverly	14,147	113	1,271	.....	.....	.....	261	15,892	914	662	1,918	.....	445	562	6,898	61	*539	.....
Binbrook	5,078	20	.....	.....	.....	.....	1,237	6,335	435	139	610	....	72	1,105	2,512	.....	.....	... ...
Flamborough E	7,419	231	.....	.....	.....	.....	2,821	10,471	466	524	1,497	.....	251	1,731	4,427	.....	..	85
Flamborough W	9,847	289	473	1,236	.....	.....	2,174	14,019	738	806	1,199	.....	272	1,344	4,785	.....	.....	1,592

*Omitted for receipts and disbursements in 1893.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Disbursements.—*Continued*				Assets.						Liabilities.							
	Refund of moneys borrowed for current expenses.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
WATERLOO.—*Con.*																		
Wilmot	1,500	322	287	21,493	6,910	.....	.....	1,000	6,430	14,340	4,348	.....	.....	6,430	.....	.....	.....	10,778
Woolwich	.....	1,396	245	20,796	2,235	.....	8,000	.....	5,940	16,175	.....	.....	23,100	5,910	.....	.....	19	29,029
Totals	6,700	3,039	1,547	117,094	12,538	4,525	57,566	2,250	12,720	89,599	7,731	.....	23,100	15,300	18,904	1,010	144	66,189
DUFFERIN:																		
Amaranth	2,295	1,462	208	17,224	422	3,893	.....	1,050	.....	5,365	1,414	.....	10,614	1,200	15,208	.....	365	28,821
Garafraxa E	1,300	149	366	10,274	611	.....	.....	.....	.....	611	.....	.....	.....	.....	1,964	.....	.....	1,964
Luther, E	2,000	709	217	12,400	604	556	.....	264	229	1,653	.....	.....	.....	4,619	9,109	.....	70	13,798
Melancthon	2,400	1,350	190	19,304	.....	8,140	1,379	1,336	.....	10,855	1,784	2,052	3,000	5,535	10,162	1,673	.....	24,206
Mono	2,000	87	489	13,929	423	2,288	.....	.....	1	2,712	2,114	6	.....	.....	.....	.....	324	2,444
Mulmur	1,100	160	214	13,869	2,976	3,067	9,800	12,500	...	28,343	2,499	.....	11,700	1,000	.....	100	654	15,953
Totals	11,095	3,958	1,884	87,600	5,036	17,944	11,179	15,150	230	49,539	7,811	2,058	25,314	12,354	36,463	1,773	1,413	87,186
LINCOLN:																		
Caistor	500	11	190	7,129	1,577	.....	.....	6,000	.....	7,577	2,389	.....	.....	.....	.....	.....	.....	2,389
Clinton	1,000	72	138	11,457	630	55	.....	.....	1,041	1,726	.....	.....	.....	841	.....	.....	.....	841
Gainsboro'	1,400	105	186	12,241	44	114	.....	.....	1,512	1,670	400	.....	.....	1,360	.....	.....	50	1,810
Grantham	400	12	227	9,907	165	3,368	.....	.....	25	3,558	2,995	292	.....	.....	.....	.....	.....	3,287
Grimsby N	4,519	74	6	11,557	781	.....	.....	800	143	1,724	947	.....	.....	.....	.....	.....	.....	947
Grimsby S	.....	104	113	6,907	519	67	.....	.....	1,916	2,502	.....	.....	.....	1,916	.....	.....	48	1,964
Louth	800	42	127	8,189	1,008	2,959	.....	1,800	236	6,003	2,750	.....	.....	263	.....	.....	.....	3,013
Niagara	500	32	75	8,536	9	5,148	.....	.....	.....	5,157	3,207	925	.....	.....	264	.....	.....	4,396
Totals	9,119	452	1,062	75,893	4,733	11,711	.....	8,600	4,873	29,917	12,688	1,217	.....	4,380	264	.....	98	18,647
WENTWORTH:																		
Ancaster	...	94	270	23,865	4,147	3,413	41,065	5,000	574	54,199	.....	.....	.....	.....	.....	*2,000	.....	2,000
Barton	.....	.....	285	8,840	2,942	67	14,091	.....	659	17,749	409	66	.....	.....	.....	.....	1,194	1,669
Beverly	1,200	66	318	13,653	2,249	3,655	13,680	3,200	....	22,774	3,017	.....	.....	.....	.....	728	....	3,745
Binbrook	.....	.....	376	5,249	1,086	524	.....	10,675	.....	12,285	.....	.....	.....	.....	.....	.....	.....	.....
Flamborough E	.....	18	592	9,591	880	5,133	.....	1,500	...	7,513	....	2,229	.....	.....	282	.....	.....	2,511
Flamborough W	1,256	378	96	12,376	1,643	.....	15,256	3,000	800	20,699	...	.....	.....	836	4,160	2,038	.....	6,998

*Borrowed from Clergy Reserve for general account.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Receipts.								Disbursements.								
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	R fund of moneys invested, including interest, etc.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Buildings and other works.	Support of the poor and other charities.	County treasurer for levy.	Payments on account of schools and education.	Drainage work.	Sinking fund and other investments.	Debentures redeemed.
WENTWORTH—*Con*	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Glanford	4,876	40	3,342	.....	....	.....	1,491	9 749	423	135	904	.....	75	1,261	2,454	.....	3,000	.....
Saltfleet	11,262	100	360	.....	.....	.....	5,570	17,292	939	428	3,881	.....	193	1,687	5,119	.....	649	.....
Totals	71,722	4,667	15,769	3,236	.....	.....	18,208	113,542	5,801	3,562	17,060	.....	2,413	11,507	35,897	61	11,845	1,677
HALTON:																		
Esquesing	11,992	172	6,891	.....	.....	.....	26,696	45,751	1,039	372	2,628	.....	441	3,128	6,464	.....	30,833	.....
Nassagaweya	6,945	29	544	279	.....	.....	2	7,799	659	125	1,933	.....	183	1,436	3,238	.....	.....	.....
Nelson	11,523	74	1,099	....	..	.....	17,872	29,968	1,0 4	181	1,823	27	544	2,459	4,694	.....	16,413	658
Trafalgar	15,732	113	1,826	2,812	.....	.....	15,615	36,138	927	346	6,803	.....	165	5,146	6,654	.....	15,582	100
Totals	46,192	388	10,370	3,091	.....	....	*59,615	119,656	3,649	1,024	13,217	27	1,333	12,169	21,080	.....	62,828	758
PEEL:																		
Albion	10,350	137	.....	2,388	.....	.....	171	13,046	478	189	2,179	.....	151	2,386	4,885	... .	.....	.....
Caledon	12 617	349	44	.....	.....	.....	3,612	16,622	8 0	270	1,804	.....	397	3,0 21	7,382	....	.....	152
Chinguacousy	16,991	306	15 803	.....	983	.... ..	407	34,490	1,095	301	2,165	.. ..	267	5 598	9,512	.....	13,881	413
Toronto	21,390	387	20,560	.....	.....	.....	2,607	44,884	1,072	333	5,749	....	387	4,751	9,119	.....	19,097	267
Toronto Gore	5,444	51	182	923	.....	.....	412	7,012	408	139	1,005	330	48	1,313	2,133	.....	.....	370
Totals	66,792	1,230	36,529	3,311	983	.....	6,609	115,454	3,903	1,232	12,902	330	1,250	17,072	33,031	.....	32,978	1,202
YORK:																		
Etobicoke	19,080	259	3,694	1,804	.....	.....	2,735	27,562	1,547	499	4,564	....	109	3,629	4,644	.....	4,177	917
Georgina	7,611	84	..	.....	.....	1,850	1,923	11,468	513	551	703	.....	29	1,502	2,378	96	.....	1,954
Gwillimbury E.	12,349	129	818	82	.....	.....	709	14,087	791	298	2,331	.....	13	3,326	5,799	.....	82	... .
Gwillimbury N.	7,286	59	.....	250	...	.....	208	7,803	397	83	592	.. .	260	1,384	2,354	.....	.....	1,952
King	18,558	592	12,801	....	....	.....	165	32,116	1,158	589	5,287	....	46	5,626	7,970	.....	10,641	150
Markham	21,370	403	.....	1,089	... ..	.....	475	23,337	1,111	509	3,982	... .	162	6,358	9,662	.....	....	163
Scarborough	14,888	474	565	785	.....	.....	147	16 809	1,079	294	4,492	.....	63	2,920	5,958	.....	.....	.....
Vaughan	23,346	669	12,185	.....	.....	.....	4,7 5	40,935	1,401	1,733	5,526	.. ..	84	5,954	8,815	.....	10,47	.....
Whitchurch	11,027	53	832	753	.....	.....	662	13,327	841	368	1,277	140	8	3,802	5,522	.....	.....	.....
York	69,012	822	14,445	77,415	....	5,458	8,532	175,684	5,841	3,470	22,659	742	518	8,621	16,982	.....	12,167	15,289
Totals	204,527	3,544	45,340	82,128	.....	7,308	20,281	363,128	14,682	8,394	51,416	882	1,322	44,122	70,084	96	37,537	20,425

* Including $56,107 railway bonus refunded.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Disbursements—*Continued.*				Assets.						Liabilities.							
	Refund of moneys for repeal for current or previous years.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrear.	Debentures sold, in hands of municipal, &c.	Loans, liabilities and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
WENTWORTH—*Con.*	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Glanford			180	8,342	1,317	35	7,050	489	178	9,069	189						288	477
Saltfleet			302	13,278	4,084		7,300		80	11,445		1,510	3,000					4,510
Totals	2,456	486	2,489	95,944	18,308	12,827	98,350	28,864	2,231	175,683	3,615	3,805	3,000	800	4,442	4,766	1,482	21,910
HALTON:																		
Esquesing		4	37	45,284	467	31	28,088	43,000		72,086								
Nassagaweya	109		56	7,109		2,853	9,041	1,740	212	13,846						279		279
Nelson		12	219	28,108	1,870	188	25,240			29,331				1,185				1,185
Trafalgar		6	460	36,158		3,054	45,173	1,625	331	51,183	746	25				4,261	1,261	6,293
Totals	109	136	1,059	117,899	2,207	7,076	120,848	45,125	1,286	166,519	746	25		1,185		4,540	1,261	7,757
PEEL:																		
Albion	2,500	87	291	13,046			8			8						88		88
Caledon		27	314	14,370	1,772	874		16,440		19,045				304			700	1,004
Chinguacousy	183	114	276	34,665	856	139	12,503	25,000	25	50,523				2,020			8	2,028
Toronto		14	674	41,748	3,270	122	28,047	2,000		33,965					2,234	4,475		6,709
Toronto Gore	263	215	25	6,340	43		3,000	520	2,067	6,730				2,667		300		2,967
Totals	3,946	977	1,625	199,518	6,941	1,142	64,630	45,029	2,090	118,848				4,991	2,234	4,863	708	12,796
YORK:																		
Etobicoke	1,264	1,503	300	23,723	2,830	11,176	14,456	750	21,923	52,094		2,122		21,627	3,581	4,000		31,330
Georgina	1,370	474	69	9,508	1,980			3,400		5,380			3,200	1,450	2,546			7,196
Gwillimbury, E		100	24	13,044	1,045		12,974	10		14,007						1,902	25	1,927
Gwillimbury, N	200	294	142	7,841	142	150				292			1,632					1,632
King		167	244	21,978	736	300	20,015		420	20,888				400				400
Markham	441	446	407	25,060	527	3,494			2,733	6,564				2,733		1,089	1,835	5,657
Scarborough	165	149	64	16,869		501	15,453	1,170		17,124						735		735
Vaughan			276	34,939	6,126	281	26,582	700	194	48,283		381					248	629
Whitchurch	788	14	40	17,771	506	573	14,015	200		15,242							127	127
York	75,899	12,048	1,481	175,084		62,400	50,778		13,365	106,363		9,057		62,411	93,038	*63,750		228,256
Totals	80,924	14,848	3,286	348,327	14,891	78,340	169,101	6,230	38,668	298,167		11,560	4,832	88,621	99,165	71,476	2,235	277,889

* Including $8,738 due sinking funds.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES—*Continued.*

Municipalities.	Receipts.								Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Buildings and other works.	Support of the poor and other charities.	County treasurer for levy.	Payments on account of schools and education.	Drainage work.	Sinking fund and other investments.	Debentures redeemed.
ONTARIO :	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Brock	15,468	208	.....	2,936	.....	.....	1,029	19,641	1,146	563	2 128	.....	393	3,853	6,370	.....	.....	511
Mara	11,327	270	504	2,000	.....	.....	1,107	15,208	1,093	247	2,109	....	269	1,405	3,366	76	625	1,290
Pickering	21,934	56	1,340	7,343	.....	.....	179	30,852	1,326	409	3,977	....	787	4,925	8,220	.....	....	1,193
Rama	4,187	36	.....	950	.....	...	55	5,228	540	206	750	102	15	376	1,852	.....	.....	.....
Reach	13,010	185	.....	4,829	.....	.....	368	18,392	930	327	1,693	.....	917	3,125	5,999	15	....	476
Scott	8,238	63	346	.....	.....	.....	874	9,521	600	323	2,137	....	206	1,887	3,483	18	.....	.....
Scugog	2,490	49	.....	.....	.....	.....	60	2,599	196	60	274	.....	.....	451	1,099	.....	.....	154
Thorah	5,623	74	*1,953	.....	.....	.....	157	7,807	665	101	1,539	.....	47	919	1,955	.....	.....	1,000
Uxbridge	11,462	1 3	.....	3,335	.....	.....	.....	14,910	853	560	1,146	.....	510	1,534	4,459	.....	860	200
Whitby E	9,339	147	160	1,725	.....	.....	362	11,733	828	177	1,745	.....	313	2,299	4,191	.....	.....	.....
Whitby	11,565	160	.....	3,315	.....	.....	462	15,502	799	619	1,282	.....	332	2,185	4,359	.....	..	1,023
Totals	114,643	1,361	4,303	26,433	.....	.....	4,653	151,393	8,976	3,592	18,760	102	3,789	23,019	45,333	109	1,485	5,847
DURHAM :																		
Cartwright	5,855	194	.....	500	.....	.....	911	7,460	437	117	960	...	338	1,312	2,791	.....	.....	.....
Cavan	11,537	162	.....	1,500	....	.....	82	13,281	952	141	1,784	25	206	2,528	5,397	.....	.....	131
Clarke	14,013	443	..	.....	.....	.....	2,994	17,450	1,139	269	2,582	.....	756	3,4 0	6,909	.....	.....	.....
Darlington	18,514	198	66	.....	.....	.....	3,295	22,073	899	370	4,306	....	648	3,7 8	8,854	.....	.....	400
Hope	11,875	131	1,627	1,704	..	.....	109	15,446	974	489	1,720	.....	817	3,041	5,964	.....	.....	.....
Manvers	9,473	328	....	.....	.....	.....	2,150	11,951	894	307	1,140	....	829	2,013	5,204	.....	.....	.....
Totals	71,267	1,456	1,693	3,704	....	.....	9,541	87,661	5,295	1,693	12,492	25	3,594	16,062	35,119	.....	.....	531
NORTHUMBERLAND																		
Alnwick	3,635	135	.....	400	....	.....	165	4,335	965	146	560	.....	106	640	1,435	.....	.....	.....
Brighton	10,108	8	.....	.....	.....	.....	228	10,344	606	383	1,402	...	378	1,960	4,185	.....	.....	.....
Cramahe	9 558	98	....	389	1,200	.....	62	11,307	647	194	1,191	201	312	1,649	5,634	.....	.....	400
Haldimand	16,011	125	.....	2,000	1,100	.....	393	19,629	762	379	4,290	.....	830	3,312	7,543	.....	.....	.....
Hamilton	11,896	219	....	1,600	.....	.....	1,028	14,743	875	277	2,665	30	493	513	6,686	.....	.....	.....
Monaghan S	3,186	37	.....	.....	.....	.....	644	3,867	265	81	478	.....	62	870	1,571	.....	.....	.....

* Including $1,500 annually from $50,000 in G. T. R. stock.

TABLE VIII. FINANCIAL STATEMENT-TOWNSHIP MUNICIPALITIES—*Continued.*

Municipalities.	Disbursements—*Continued.*				Assets.						Liabilities.							
	Refund of moneys borrowed for current expenses.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
ONTARIO:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Brock	2,936	312	269	18,481	1,100	80	..	1,100	4,070	6,330	113	..	..	1,862	2,176	..	..	4,151
Mara	2,000	1,145	198	15,885	1,355	..	11,056	1,650	..	13,981	..	..	11,600	1,200	*5,082	..	..	17,882
Pickering	8,080	910	425	20,852	..	4,491	4,000	1,850	265	10,606	..	896	..	3,971	17,043	1,987	140	24,037
Rama	1,07[illegible]	321	18	5,228	..	1,866	2,642	1,197	..	5,49[illegible]	..	..	..	1,700	3,00[illegible]	1,250	..	5,950
Reach	4,458	176	116	18,231	161	2,277	..	1,600	60	4,098	..	..	..	..	1,116	1,329	100	2,545
Scott	..	59	254	8,947	674	..	4,762	800	..	6,1[illegible]	..	..	..	..	985	..	..	985
Scugog	..	9	26	2,240	340	..	..	4,520	..	4,830	..	170	..	..	..	..	92	262
Thorah	..	870	695	7,690	108	388	53,745	960	..	55,171	..	..	14,050	..	..	..	7,790	21,790
Uxbridge	2,687	1,318	182	14,240	664	283	860	1,000	125	2,932	..	..	19,000	1,800	§869	..	..	21,669
Whitby E	1,725	28	112	11,418	345	165	3,200	1,100	7	4,787	..	..	..	..	..	..	87	87
Whitby	3,016	687	21,142	16,143	59	436	..	1,000	35	1,550	..	..	..	1,286	9,837	300	..	11,423
Totals	26,024	5,814	3,347	146,687	4,696	9,756	80,265	16,717	4,542	115,976	113	1,066	44,600	11,819	39,229	5,726	8,209	110,772
DURHAM:																		
Cartwright	590	16	83	6,588	907	46	..	2,340	..	3,293	..	..	..	..	..	..	..	..
Cavan	1,000	79	923	17,060	15	4,164	..	3,000	2,400	9,579	2,554	..	..	†455	..	..	170	3,179
Clarke	..	..	241	15,826	2,114	1,134	..	2,000	..	5,248	..	..	..	..	..	..	..	..
Darlington	..	66	115	19,296	2,677	749	..	500	..	3,926	555	..	..	900	..	..	111	1,566
Hope	2,100	119	102	15,446	..	4,114	34,368	200	..	38,682	..	..	..	..	..	1,044	..	1,044
Manvers	..	..	105	10,552	1,389	1,310	..	..	..	2,709	395	..	..	..	..	..	1,569	1,964
Totals	4,100	279	1,289	80,549	7,112	11,517	34,368	8,040	2,400	63,437	3,504	..	..	1,355	..	1,044	1,850	7,753
NORTHUMBERLAND:																		
Alnwick	800	35	91	4,178	157	239	..	2,800	..	3,196	130	..	..	..	..	..	..	130
Brighton	191	..	401	9,736	988	..	..	1,700	..	2,688	345	..	..	..	..	..	..	345
Cramahe	764	54	404	11,307	..	1,314	..	4,765	..	6,079	..	..	..	800	..	189	..	989
Haldimand	1,000	41	655	19,292	337	6,701	..	3,156	..	10,194	2,319	483	..	1,100	..	2,455	611	6,464
Hamilton	..	10	777	12,026	2,447	7,079	860	2,000	410	12,667	3,179	..	..	..	..	1,600	820	5,699
Monaghan S	..	..	37	5,764	597	688	..	..	..	1,191	132	..	..	..	..	..	102	234

‡ Including $938 deficit of late treasurer. * Including $326 reported in 1893 as paid but not paid. † Omitting $70 overstated in 1893. § Due sinking fund.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Receipts.								Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Buildings and other works.	Support of the poor and other charities.	County treasurer for levy.	Payments on account of schools and education.	Drainage work.	Sinking fund and other investments.	Debentures redeemed.
NORTHUMBERLAND —*Con.*	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Murray	8,023	26	.....	93	.....	.....	657	8,799	573	290	1,294	...	259	1,740	4,362	.....	.....	120
Percy	9,795	239	.....	1,6'0	.....	.....	834	1',518	520	283	2,003	49	226	1,917	4,845	.....	.....	504
Seymour	16,414	47	.....	21,090	.....	.....	*5,:87	42,938	791	369	5,725	.....	269	3,009	4,638	.....	.....	1,878
Totals	88,626	934	.....	27,222	2,300	.....	9,398	128,480	5,404	2,342	19,608	280	2,935	16,141	40,899	.....	.....	2,702
PRINCE EDWARD :																		
Ameliasburg	13,423	65	1,467	297	.....	.....	116	15,368	511	395	553	.....	238	3,791	5,169	.....	2,698	.....
Athol	3,632	.....	4:7	226	....	.....	276	4,571	149	87	9	...	405	1.3 1	2,009	.....	...	.....
Hallowell	9,756	54	17	.....	.....	.....	502	10,:29	353	313	222	.....	443	3,714	4,931	.....	.....	.....
Hillier	7,0 6	21	29	400	.....	.....	177	7,643	348	1:0	143	.....	469	2,212	3,819	.....	.....	.....
Marysburg N	4,462	3	405	180	.....	.....	443	5,493	190	189	157	.....	68	1,660	2,568	.....	.....	.....
Marysburg S	3,445	109	468	1,280	.....	.....	2	5,304	208	150	276	.....	242	1,340	2,783	.....	.....	.....
Sophiasburg	9,099	46	142	600	....	.....	210	10,097	3:0	117	321	.....	429	....	5,049	.....	.....	.....
Totals	50,833	298	2,965	2,983	.....	.....	1,726	58,805	2,109	1,361	1,765	.... .	2,294	14,068	26,089	.....	2,698	.....
LENNOX AND ADDINGTON :																		
Adolphustown	3,329	3	108	48	.....	.....	363	3,911	194	57	181	....	109	1,593	1,192	.....	248	.....
Amherst Island	4,311	24	....	.....	.....	.....	154	4,489	152	65	149	137	152	1,806	1,:66	.....	.....	.....
Camden East	22,:23	324	1,031	1,000	....	.....	1,261	25,9.9	1,164	304	2,393	.. ...	588	8,764	7,594	252	1,651	.....
Denbigh, etc	1,458	23	....	.....	.....	.....	56	1,843	140	118	480	.....	....	316	685	.....	.....	.....
Ernestown	19,247	69	1,075	600	....	.....	242	21,:33	712	225	2,290	.....	173	6,:80	9,:95	63	.....	282
Frederick-b'g N.	6 674	.....	105	551	.....	.....	198	7,5:8	507	121	402	.....	48	3,:08	2,476	.....	..	.....
Fredericksb'g S.	7,787	2	103	900	...	.....	9	8,801	267	42	1,063	.....	149	2,877	2,:84	.....	103	.....
Kalidar, etc	1,598	58	.....	46	....	.....	386	2,088	183	130	3:8	.....	28	:90	1,0 4	.....	.....	.....
Richmond	10,:82	13	10,531	932	.....	.....	767	22,6 5	546	194	1,801	.....	548	5,072	4,793	51	9,:90	.....
Sheffield	9,369	262	1,875	475	.....	.....	859	12,840	531	294	1,096	.....	155	4,543	2,247	.....	2,782	.....
Totals	86,478	778	14,888	4,552	.....	.....	4,601	111,297	4,396	1,550	10,154	137	1,950	25,446	33,246	306	15,974	282

* Including $2,833 from Dominion for swing bridge.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Disbursements—*Continued.*				Assets.						Liabilities.							
	Refund of moneys not required for current purposes.	Interest on debts, advances and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrear.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
NORTUMBERLAND AND DURHAM.	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Murray		7	154	8,739	..	1,726	.....	2,100	.....	3,726	...	....	...	.....	.....	93	...	93
Percy	1,070	178	176	12,161	387	261	.....	7,500	.....	8,148	280	.....	1,761	.....	.....	.....	8	2,149
Seymour	24,090	1,176	610	40,086	2,852	5,242	.....	10,000	1,980	20,074	393	.....	10,030	353	.....	6,200	2,666	29,594
Totals	25,792	1,481	3,345	120,839	7,641	23,241	800	38,921	2,390	67,995	6,878	483	12,411	2,253	.....	10,133	4,127	36,315
FRONTENAC:																		
Amherst	747	1,944	85	15,231	187	1,582	*31,071	4,200	134	37,174	3,176	....	.....	.....	15,000	297	115	18,588
Anglesea	160	4	8	4,297	24	105	2,250	1,000	.....	3,659	.....	...	.....	.....	.....	25	.....	25
Hallowell	...	.....	12	10,168	161	720	.....	.....	...	7,54	.....	....	.....	.....	.....	.....	.....	.....
Hinchinbrooke	400	.....	90	7,641	32	511	.....	1,000	391	1,934	.....	.....	.....	.....	.....	.....	.....	.....
Marysburg North	180	40	78	5,240	253	290	6,899	1,200	....	8,642	581	....	.....	.....	.....	700	.....	781
Marysburg South	548	154	25	5,334	..	1,746	10,000	850	....	12,646	....	....	.....	.....	.....	3,783	.....	3,783
Sophiasburg	...	....	14	6,280	3,817	269	3,491	4,400	.....	12,077	3,023	.....	.....	.....	.....	653	315	3,991
Totals	2,075	1,242	430	84,131	4,074	5,066	53,721	12,850	525	76,836	6,780	..	.....	....	15,000	4,558	430	26,748
LENNOX AND ADDINGTON.																		
Addington	48	....	102	3,774	137	....	3,000	1,700	...	4,837	.....	.....	.....	.....	.....	.....	81	81
Amherst Island	...	.....	32	3,760	789	1,360	..	200	...	2,359	690	...	.....	.....	.....	.....	160	850
Camden East	1,180	1,811	332	24,850	80	2,955	22,646	1,000	509	27,129	892	610	30,000	..	.....	.....	.....	31,502
Denbigh, etc	..	..	5	1,772	71	789	37	...	...	897	.....	.....	.....	.....	.....	.....	.....	.....
Ernestown	440	291	448	29,852	874	5,439	24,201	650	...	30,884	3,874	.....	.....	2,034	.....	2,000	55	8,163
Fredericksburg N	300	10	56	7,28	...	2,104	4,000	400	.....	6,64	1,188	3	.....	109	.....	151	...	2,682
Fredericksburg S	1,580	...	86	8,951	250	2,462	2,262	800	...	5,781	1,070	512	... .	..	.....	1,025	...	2,607
Kaladar, etc	...	.....	35	2,088	..	1,374	.....	175	...	1,899	...	560	.....	.....	.....	40	1,244	1,799
Richmond	200	.....	280	12,630	.....	4,611	17,682	2,300	1 5	24,118	2,564	...	.....	.....	.....	3,148	...	5,712
Sheffield	10	942	200	12,840	.....	4,150	5,102	400	135	9,987	135	2,038	15,000	..	.....	1,276	10	18,459
Totals	3,558	3,054	1,576	109,057	1,660	25,404	78,037	8,125	779	114,005	10,418	3,663	45,000	2,734	.....	8,521	1,620	71,006

* Omitting $150 probable loss on mortgage.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Receipts.								Disbursements.								
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for school purposes.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Buildings and other works.	Support of the poor and other charities.	County treasurer for levy.	Payments on account of schools and education.	Drainage work.	Sinking fund and other investments.	Debentures redeemed.
FRONTENAC:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Barrie	1,110	27	.....	.....	.....	.....	370	1,507	161	265	34	.....	.....	279	519	.....	.....	99
Bedford	4,143	25	.....	307	.....	.....	58	4,533	333	63	574	...	99	1 016	1,949	.....	.....	187
Clarendon, etc.	2,651	5	.....	.....	.....	.....	86	2,742	188	70	55	.....	.....	1,104	1,222	.....	.....	.....
Hinchinbrooke	3 552	63	.....	.....	.....	.....	572	4,187	344	243	441	...	19	452	1,577	.....	.....	50
Howe Island	1,643	.....	.....	.....	.....	.....	12	1,655	115	16	61	.....	.....	50	760	.....	.....	100
Kennebec	2,749	25	.....	.....	.....	.....	125	2,909	345	95	630	.....	37	160	1,336	.....	.....	.....
Kingston	16 061	124	890	.....	.....	.....	1,567	18,142	611	232	1,134	...	205	9 685	4,447	.....	.....	...
Loughborough	7,654	63	175	13	.....	.....	19	7,924	410	208	868	.....	29	3,008	2 902	.....	.....	209
Olden	2,326	12	.....	.....	.....	.....	258	2,591	320	222	394	.....	86	110	975	.....	.....	.....
Oso	2,377	120	.....	2	.....	.....	91	2,590	312	163	373	.....	16	648	881	.....	.....	110
Palmerston, etc.	1,804	37	3	.....	.....	.....	220	2,064	292	188	43	.....	..	474	900	.....	...	75
Pittsburg	17,062	143	.....	1,500	.....	.....	466	19 171	644	260	3,103	100	164	933	4.560	640	...	2,900
Portland	9 345	126	450	.....	.....	.....	622	10,5 3	430	261	1,095	.....	139	3,930	3,616	.....	.....	.....
Storrington	7,093	43	.....	.....	200	.....	267	7 603	393	192	457	.....	24	2,627	3,488	.....	.....	150
Wolfe Island	6,652	78	.....	200	.....	.....	271	7,181	387	104	247	.....	139	2,661	3,194	.....	.....	.....
Totals	86,202	911	1,018	2,022	200	.....	4,999	95,352	5,285	2,582	8,509	100	957	27,541	32,326	640	.....	3,880
LEEDS:																		
Bastard and Burgess S.	10,098	200	953	.....	.....	.....	2,966	14,217	477	364	395	....	240	1,999	5,489	.....	1,338	.....
Crosby N.	4,563	260	63	816	..	.....	605	6,307	530	127	676	.....	176	915	2,774	.....	433	.....
Crosby S	5.290	113	310	.....	500	.....	1,321	7,534	404	98	169	.....	101	1,271	3.668	.....	265	254
Elizabethtown	16 623	1,116	136	.....	.....	.....	214	18 089	980	278	2,564	.....	204	3,368	7,951	.....	501	510
Elmsley S	2,161	224	.....	.....	.....	.....	517	2,899	261	79	527	.....	.....	.....	1,908	.....	.....	.....
Kitley	7,627	123	.....	.....	.....	.....	1,073	8,823	700	153	738	.....	178	1,983	3,963	.....	.....	.....
Leeds and Lansdowne, Front.	12,916	159	4,720	1,500	.....	.....	148	19,473	706	255	3,477	.....	389	.....	5,346	.....	1,200	4,600
Leeds and Lansdowne, Rear	7,120	196	207	.....	.....	.....	1,136	8,659	638	88	573	.....	43	1,618	3,477	.....	364	105

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Disbursements.—*Continued.*				Assets.						Liabilities.							
	Refund of moneys borrowed for current expenses.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous	Total liabilities.
FRONTENAC:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Barrie		24	10	1,294	116	1,022		450		1,588	170	516		278			6	1,069
Bedford		71	102	4,194	159	1,949			669	2,697	600	39		768	300	307	425	2,449
Clarendon, etc				2,000	109	1,378				1,481	340	924						1,264
Hinchinbrooke		18	275	3,432	708	1,614		50		2,431	1,170	104		250			1,181	2,705
Howe Island		18	31	1,600	49	46				95				200			66	266
Kennebec			83	2,078	223	2,256		600		3,078	682	1,117					220	2,019
Kingston			123	16,447	1,700	4,478	1,800	1,000		9,253	4,754						543	5,297
Lansdowne		115	175	7,004		2,285				2,285	220	877	2,092			13	300	3,502
Loughborough			44	2,178	432	1,848		1,000		3,280	1,467	131					310	2,008
Olden			28	2,000		1,846		500		2,346	662	562		270		2	302	1,577
Palmerston, etc		20	32	1,983	30	1,718		3,000		4,809	1,500	481		400			91	2,550
Pittsburg		192	44	12,849	6,661	2,284				9,047	5,400	113				1,510	208	7,231
Portland			46	3,017	1,093	4,718	5,730	1,000		12,499	3,905	21						3,926
Storrington		2	47	7,887	240	3,244		1,000		4,484	2,655	61		200				2,869
Wolfe Island	260	6	26	6,864	247	2,445				2,862	2,542	320						2,862
Totals	259	502	1,655	83,656	11,736	34,274	7,600	8,000	669	62,879	26,150	5,266	2,092	2,226	300	1,832	3,754	41,720
LEEDS:																		
Bastard and Burgess S.		1,170	41	11,403	2,724		†17,41	1,500		21,638	415		23,000					23,415
Crosby N.		550	126	6,407		2,820	3,073	700		6,593	936	769	11,000			816		13,521
Crosby S.		360		6,500	1,004		5,445	3,500		9,949			4,500	1,149				5,649
Elizabethtown		645	176	17,177	912	6,360	4,166	2,000	185	13,823	3,429	215	7,000	460	5,000			16,044
Elmsley S.			44	2,810	73	1,128		500		1,701	823							823
Kitley			29	7,736	1,088					1,088								
Leeds and Lansdowne, Front	1,800	327	405	18,205	1,268	751	388	5,000		7,407	2,397			400			86	2,877
Leeds and Lansdowne, Rear		268	119	7,279	1,380	548	1,673			3,581			5,000	110				5,110

* Omitting $29 overstated in 1893. † Information is not very satisfactory as late treasurer had a deficit.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Receipts.								Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commission.	Other expenses of municipal government.	Roads and bridges.	Buildings and other works.	Support of the poor and other charities	County treasurer for levy.	Payments on account of schools and education.	Drainage work.	Sinking fund and other investments.	Debentures redeemed.
LEEDS.—*Con.*	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Yonge and Escott, Front	9,641	83	.....	1,000	.....	8,788	1,133	20,645	480	318	676	.....	192	1,936	5,043	8,437	1,171	140
Yonge and Escott, Rear	7,880	88	223	678	.....	.....	653	9,522	290	96	91	.....	43	951	3,649	127	678	.....
Totals	83,949	2,562	6,612	3,994	500	8,788	9,756	116,161	5,466	1,856	9,886	.....	1,566	14,041	43,268	8,564	5,950	5,609
GRENVILLE:																		
Augusta	11,802	848	1,603	.....	.....	.....	1,525	15,178	662	551	1,771	.....	564	3,310	6,521	257	.....	.....
Edwardsburg	10,430	45	6,130	5,223	.....	.....	160	21,988	529	329	1,227	.....	511	3,025	6,171	.....	5,050	.....
Gower S	3,025	10	....	.....	.....	.....	294	3,329	271	61	322	.....	.....	827	1,055	26	.....	.....
Oxford on Rideau	9,995	159	.....	.....	.....	.....	150	10,304	631	229	1,311	.....	383	2,461	4,345	.....	.....	.....
Wolford	5,081	34	.....	.....	.....	.....	62	5,177	298	391	226	.....	96	.....	3,246	.....	.....	.....
Totals	40,333	1,096	7,133	5,223	.....	.....	2,191	55,976	2,391	1,561	4,857	.....	1,554	9,624	21,338	283	5,000	.....
DUNDAS:																		
Matilda	15,932	1	.....	13,077	490	.....	894	30,394	439	451	1,840	.....	436	4,203	6,895	8,442	.....	607
Mountain	12,472	280	....	250	.....	.....	768	13,770	384	239	1,328	413	66	3,486	6,516	.....	.....	180
Williamsburg	13,565	42	2,744	.....	600	.....	2,145	19,096	410	275	1,676	.....	445	3,996	6,886	3,410	.....	190
Winchester	15,529	26	.....	.....	.....	.....	929	16,484	400	280	2,262	.....	117	3,384	5,987	373	.....	2,079
Totals	57,498	349	2,744	13,327	1,090	.....	4,736	79,744	1,633	1,245	7,106	413	1,064	15,159	26,584	12,255	..	3,049
STORMONT:																		
Cornwall	11,466	418	.....	2,700	.....	.....	699	15,283	939	294	2,239	.....	402	2,596	5,555	.....	...	54
Finch	10,341	202	...	2,050	.....	.....	790	13,383	500	215	3,069	.....	.....	340	4,034	510	.....	483
Osnabruck	12,009	519	37	.....	.....	.....	2,645	15,300	439	377	1,179	.....	317	1,971	7,134	.....	.....	422
Roxborough	8,436	410	....	500	.....	.....	130	9,476	497	161	1,379	.....	74	2,258	3,961	.....	.....	.....
Totals	42,342	1,549	37	5,250	.....	.....	4,264	53,442	2,375	1,047	7,896	.....	793	7,165	20,684	510	.....	959
GLENGARRY:																		
Charlottenburg	12,274	398	.....	83	.....	.....	54	12,809	1,292	230	2,399	.....	173	3,708	4,684	.....	53	.....
Kenyon	14,134	224	.....	780	.....	.....	81	15,219	798	922	1,600	.....	98	2,476	7,428	.....	.....	320

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Disbursements.—*Continued.*				Assets.						Liabilities.							
	Refund of moneys for taxes paid for collectors' fees.	Interest on loans, and value and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenditure and interest.	Miscellaneous.	Total liabilities.
LEEDS—*Con.*	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Yonge and Escott, Front	1,300	53	443	20,182	456	323	1,171	1,500	.....	3,450	.....	.....	.....	140	8,788	.....	.....	8,928
Yonge and Escott, Rear		750	.....	6,675	2,847	1,258	5,732	1,440	2,998	14,235	.....	.....	15,000	1,987	.....	3,432	.....	20,419
Totals	2,850	4,078	1,365	104,409	11,772	13,188	38,932	15,900	3,183	82,955	8,090	984	65,500	4,186	13,788	4,248	80	96,736
GRENVILLE:																		
Augusta		99	144	13,879	1,299	4,759	18,760	3,000	408	28,226	3,390	.....	.....	.....	.....	2,635	.....	6,025
Edwardsburg	3,891	138	1,250	21,988	.....	3,389	19,327	5,000	.....	27,716	3,115	.....	.....	.....	.....	1,774	.....	4,889
Gower, S.	.....	.....	165	2,667	662	618	.....	.....	.....	1,280	847	.....	.....	.....	.....	.....	12	859
Oxford on Rideau	746	22	74	10,502	102	2,795	.....	6,000	.....	8,897	2,534	.....	.....	.....	.....	.....	.....	2,534
Wolford	.....	.....	91	4,348	829	1,866	.....	500	.....	3,195	1,735	.....	.....	.....	.....	.....	.....	1,735
Totals	4,547	259	1,670	53,084	2,892	13,427	38,087	14,500	408	69,314	11,611	.....	.....	.....	.....	4,407	122	16,140
DUNDAS:																		
Matilda	6,155	468	371	30,394	.....	3,242	.....	.....	9,932	13,174	5,503	.....	.....	490	5,140	8,618	.....	19,787
Mountain	250	81	142	13,325	445	.....	.....	.....	.....	445	.....	.....	.....	.....	100	.....	.....	100
Williamsburg	.....	16	254	17,787	1,560	54	.....	.....	107	1,670	.....	.....	.....	430	2,057	.....	.....	2,484
Winchester	.....	888	491	16,171	313	28	460	.....	1,706	2,507	401	.....	10,000	978	8,652	.....	2,800	17,830
Totals	6,405	1,402	1,162	77,477	2,267	3,324	460	.....	11,745	17,796	5,904	.....	10,000	1,878	11,641	8,618	2,800	40,873
STORMONT:																		
Cornwall	2,200	70	549	14,998	285	6,101	.....	.....	.....	6,386	3,036	2,375	.....	248	.....	1,945	1,990	8,643
Finch	2,650	181	137	12,949	1,384	342	.....	400	209	2,375	1,792	.....	482	1,100	.....	.....	224	3,598
Osnabruck	.....	366	421	12,646	2,644	2,752	.....	.....	1,670	7,066	2,780	.....	.....	1,251	7,305	.....	70	12,149
Roxborough	900	37	140	9,497	69	7,556	.....	500	.....	8,125	1,310	3,492	.....	.....	.....	555	.....	5,357
Totals	5,750	684	1,247	49,110	4,382	16,741	.....	900	1,879	23,852	8,818	5,867	482	2,779	7,305	1,570	2,968	29,767
GLENGARRY:																		
Charlottenburg	78	.....	192	12,898	.....	6,386	53	.....	44	6,483	603	2,666	.....	.....	11,256	83	389	14,982
Kenyon	1,069	48	257	15,016	203	2,493	.....	1,650	2,920	7,266	558	.....	.....	100	.....	780	.....	1,438

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Receipts.								Disbursements.								
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refund of moneys invested, including interest	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Buildings and other works.	Support of the poor and other charities.	County treasurer for levy.	Payments on account of schools and education.	Drainage work.	Sinking fund and other investments.	Debentures redeemed.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
GLENGARRY—*Con.*																		
Lancaster	10,116	358	.....	.....	.....	.....	601	11,075	865	116	1,535	.....	83	1,975	5,768	.....	.....	.....
Lochiel	11,104	361	135	.....	.....	.....	146	11,746	839	309	1,698	.....	99	1,960	5,755	168	23	250
Totals	47,628	1,341	135	863	.....	.....	882	50,849	3,794	1,577	7,232	.....	453	10,119	23,635	168	76	570
PRESCOTT:																		
Alfred	7,263	245	.....	.....	.....	.....	.....	7,508	418	234	807	.....	.....	867	4,218	.....	.....	118
Caledonia	5, 64	98	.....	.....	.....	.....	177	5,439	429	106	533	.....	.....	938	2,258	60	.....	224
Hawkesbury E.	7,969	254	.....	.....	.....	.....	1,273	9,496	442	232	480	72	.....	2,196	5,164	.....	.....	.....
Hawkesbury W.	9,715	573	.....	.....	.....	.....	289	10,577	404	205	177	.....	.....	1,962	4,873	.....	.....	904
Longueuil	2,271	33	.....	144	.....	.....	.....	2,448	176	27	58	.....	.....	525	1,543	.....	.....	.....
Plantagenet N.	10,237	433	.....	600	.....	.....	262	11,532	878	203	2,146	.....	35	1,355	5,536	.....	.....	578
Plantagenet S	7,520	207	.....	.....	.....	.....	172	7,899	423	173	660	.....	.....	1,204	3,843	219	...	492
Totals	50,139	1,843	.....	744	.....	.....	2,173	54,899	3,175	1,180	4,861	72	35	8,987	27,529	279	.....	2,316
RUSSELL:																		
Cambridge	5,378	202	.....	300	.....	1,000	98	6,978	655	378	813	.....	35	847	2,206	376	.....	75
Clarence	11,633	136	.....	.....	.....	.....	320	12,139	673	150	2,168	.....	55	1,597	4 813	267	.....	482
Cumberland	9.106	165	.....	.....	.....	.....	1.276	10,607	686	186	2,805	....	26	1,674	3,564	.....	.....	100
Russell	8,876	148	.....	500	.....	.....	5,391	14,915	858	160	3,142	229	28	336	6,328	.....	.....	756
Totals	35,103	651	.....	800	.....	1,000	7,085	44,639	2,872	874	9,018	229	144	4,454	15,911	643	.....	1,413
CARLETON:																		
Fitzroy	10,896	84	...	300	....	.....	698	11,978	697	99	1,543	.....	20	2,337	4,471	.....	.....	.....
Gloucester	17,911	608	863	2,039	.....	.....	31	21,452	1,471	704	2,053	76	61	4,701	9.516	449	138	1,150
Goulbourn	8,632	67	504	....	....	.....	2,602	11,805	571	116	1,191	.....	50	2.805	4.804	.....	.....	.....
Gower N	7,504	129	.....	200	.....	.....	522	8,855	510	303	1,194	.....	33	1 751	3,564	215	....	140
Huntley	8,562	102	....	....	.....	.....	1,584	10,248	618	110	1,307	.....	186	3,114	4.195	.....	.....	71
March	3,810	41	24	.....	....	.....	.....	3,878	200	74	366	.....	11	265	2.183	17	.....	450
Marlborough	4,609	39	..	.....	....	.....	1,631	6,279	482	510	147	....	70	1,346	2.510	.....	.....	.....
Nepean	17,871	313	1,060	.....	.....	.....	61	19,305	1,575	400	1,939	.....	40	4,846	8,907	.....	.....	765

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Disbursements—*Continued.*				Assets.						Liabilities.							
	Refund of moneys borrowed for current expenses.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local School rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
GLENGARRY—*Con.*																		
Lancaster	.....	.....	208	10,550	525	5,402	200	.....	.....	6,127	2,078	1,178	.....	.....	.....	.....	.....	3,256
Lochiel	..	29	579	11,769	37	12,891	204	70	.....	13,202	2,170	7,278	.....	200	.....	.....	1,138	10,786
Totals	1,147	77	1,236	50,084	765	27,172	457	1,720	2,964	33,078	5,379	11,116	.....	360	11,256	863	1,518	30,492
PRESCOTT:																		
Alfred	31	78	353	7,124	384	3,901	.....	.....	.....	4,288	920	1,085	.....	1,180	.....	.....	102	3,288
Caledonia	234	119	26	5,627	412	3,057	.....	4,700	....	8,169	879	1,701	.....	.....	588	456	431	4,455
Hawkesbury E	...	...	13	8,539	957	1,753	.....	...	.....	2,710	1,244	.....	.....	.....	.....	.....	200	1,444
Hawkesbury W	..	1,018	91	9,659	958	1,480	...	20,900	.....	23,318	300	.....	13,907	5,118	335	.....	...	19,660
Longueuil	108	...	11	2,448	...	1,427	...	.....	.....	1,427	544	734	.....	.....	.....	144	.....	1,422
Plantagenet N	...	304	140	11,174	358	6,027	.....	2,160	...	8,545	1,302	2,331	.....	1,284	3,614	600	587	9,718
Plantagenet S	125	225	69	7,422	477	2,449	.....	1,200	.....	4,126	1,253	...	.....	.....	1,250	1,825	...	4,328
Totals	498	1,747	694	51,373	3,526	20,097	....	28,960	.....	52,583	6,442	5,851	13,907	7,582	6,167	3,035	1,321	44,305
RUSSELL:																		
Cambridge	300	180	1,077	6,972	6	4,353	.....	.....	.....	4,359	823	2,046	.....	690	925	1,138	233	5,765
Clarence	645	278	496	11,624	515	7,693	.....	800	66	8,984	1,608	3,596	.....	988	.....	1,019	...	7,212
Cumberland	...	49	10	9,160	1,447	7,866	.....	500	.....	9,813	1,668	3,336	...	600	.....	.....	683	6,287
Russell	100	349	3,337	14,623	292	5,292	.....	1,000	.....	6,584	2,128	2,324	.....	1,892	1,092	412	.....	7,853
Totals	1,045	856	4,920	42,379	2,260	25,114	...	2,300	66	29,740	6,227	11,302	.....	4,088	2,017	2,569	916	27,119
CARLETON:																		
Fitzroy	600	12	130	9,904	2,074	4,884	...	6,345	.....	13,303	3,062	3,124	.....	.....	.....	.....	78	6,260
Gloucester	1,141	384	108	21,429	.....	21,375	646	3,650	47	25,718	5,046	10,503	.....	3,100	2,400	2,277	203	23,329
Goulbourn	.....	.....	410	10,055	1,768	1,246	7,791	400	.....	11,175	2,492	.....	.....	.....	.....	.....	460	2,952
Gower, N	.....	25	60	7,795	560	2,330	.....	4,500	....	7,390	1,806	...	.....	.....	.....	209	177	2,192
Huntley	.....	51	160	9,851	427	2,535	.....	.....	.....	2,962	1,906	1,288	.....	777	.....	.....	...	3,971
March	53	54	2	3,735	143	1,645	400	1,000	....	3,188	984	...	.....	450	.....	.....	...	1,439
Marlborough	.....	.....	445	5,510	769	2,546	.....	40	....	3,715	1,329	.....	.....	.....	.....	.....	.....	1,329
Nepean	.....	334	120	18,926	379	16,814	9,500	3,050	1,009	30,752	4,508	6,555	.....	5,610	.....	.....	131	16,804

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Receipts.								Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Buildings and other works.	Support of the poor and other charities.	County treasurer for levy.	Payments on account of schools and education.	Drainage work.	Sinking fund and other investments.	Debentures redeemed.
CARLETON—*Con.*	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Osgoode	14,670	793	22	713	.....	6,635	645	23,478	777	276	2,011	.....	5	3,853	7,802	6,913	713	500
Torbolton	3,049	2	.....	34	.....	.....	.....	3,085	270	122	245	.....	.....	940	1,162	.....	.....	.....
Totals	97,494	2,181	2,473	3,286	.....	6,635	7,774	119,843	7,246	2,714	11,996	76	476	25,438	49,204	7,594	851	3,076
RENFREW:																		
Admaston	5,588	37	.....	.....	775	.....	127	6,527	352	231	451	.....	.....	1,452	3,561	.....	.....	.....
Algona S.	918	5	.....	3	.....	.....	7	933	168	35	19	.....	.....	175	461	.....	.....	.....
Alice, etc	2,880	19	.....	58	.....	.....	23	2,980	261	184	278	.....	30	825	1,591	.....	.....	.....
Bagot and B.	2,709	134	210	.....	.....	.....	373	3,426	295	166	375	.....	63	362	1,252	.....	120	300
Bromley	5,235	47	.....	.....	.....	.....	622	6,004	375	149	433	.....	.....	1,877	2,637	.....	.....	.....
Brougham	762	78	.....	.....	700	.....	189	1,729	167	5	.....	.....	110	173	1,042	.....	.....	.....
Brudenell, etc.	2,457	101	.....	.....	.....	.....	2	2,560	262	62	26	.....	30	275	1,237	.....	80	.....
Grattan	2,983	2	.....	43	.....	.....	124	3,157	221	103	500	.....	5	800	1,450	.....	.....	.....
Griffith, etc	829	.....	.....	.....	.....	.....	174	1,003	115	46	93	.....	.....	177	552	.....	.....	.....
Hagarty, etc.	1,274	345	1,255	500	.....	.....	217	3,591	330	143	384	.....	.....	579	502	678	.....	200
Head, etc	1,469	58	7	44	.....	.....	27	1,605	242	22	.....	.....	.....	110	1,068	.....	97	.....
Horton, etc.	3,904	.....	.....	200	.....	.....	144	4,248	200	134	180	169	13	1,012	1,688	.....	.....	110
McNab	8,810	179	47	.....	.....	.....	3,350	12,386	566	236	3,211	.....	104	1,929	3,600	.....	.....	1,000
Pembroke	1,272	.....	.....	.....	.....	.....	402	1,674	189	110	200	.....	.....	225	586	.....	.....	80
Petawawa	1,452	44	.....	.....	500	.....	194	2,190	205	6	132	.....	35	268	1,210	.....	.....	50
Radcliffe & Rag'n	2,310	62	.....	.....	.....	.....	16	2,588	252	35	94	.....	22	277	1,742	.....	.....	100
Rolph, B & Wylie	1,880	39	.....	.....	400	.....	118	2,437	171	57	43	.....	.....	260	1,339	.....	.....	.....
Ross	5,979	236	.....	.....	.....	.....	1,518	7,733	293	115	721	.....	.....	1,409	3,470	.....	.....	404
Sebastopol	1,097	63	.....	.....	.....	.....	.....	1,160	192	29	63	.....	.....	150	447	.....	.....	.....
Stafford	2,128	.....	.....	163	.....	.....	518	2,809	189	230	133	.....	.....	104	1,291	.....	.....	.....
Westmeath	7,752	139	.....	.....	4,600	.....	108	12,699	774	227	1,095	.....	6	1,678	6,153	69	.....	859
Wilberforce, etc.	3,750	78	.....	.....	.....	.....	970	4,798	357	90	571	.....	7	1,106	1,927	.....	.....	.....
Totals	67,731	1,666	1,519	1,611	6,975	.....	9,328	88,230	6,204	2,481	9,006	169	425	15,243	38,629	747	297	3,123

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Disbursements.—*Continued.*				Assets.						Liabilities.							
	Refund of moneys borrowed for current expenses.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Local improvement debentures.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
CARLETON—Con.	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Osgoode		475	41	28,[illegible]	92	93	4,000	3,040	148	7,373	600				13,635	* 4,000		18,235
Torbolton	305		41	3,[illegible]		3,329		840		4,169	1,003	2,010				34	109	3,177
Totals	2,000	1,359	1,526	113,031	6,212	36,997	22,287	23,145	1,201	109,766	22,741	24,306		9,937	16,035	6,520	1,149	79,688
RENFREW:																		
Admaston			127	6,174	223	2,107		650		4,440	1,450	838		775			1,200	4,233
Algona, S	8		78	931		1,681		600		1,281	50	725				3	182	1,019
Alice, etc			8	2,[illegible]		240			47	468	765					58	50	873
Bagot and B		186	42	3,[illegible]	256	281	1,000	350		2,[illegible]				1,450				1,450
Brudley			16	3,[illegible]	347	1,[illegible]		800		2,[illegible]	774							774
Brougham			39	1,[illegible]	230	274				504		103		700			66	869
Brunswick, etc		18	169	2,[illegible]	601	1,[illegible]	230	2,250		4,[illegible]	342	1,133		300				1,775
Grattan			8	3,[illegible]		1,[illegible]		3,250		4,[illegible]	778	3				43	135	959
Griffith, etc				[illegible]	70	[illegible]				778	300	240					249	663
Hagarty, etc	500	117	136	9,[illegible]	97	1,[illegible]	2,000	2,700		6,[illegible]	3 0	630	2,000		1,800	500		5,340
Head, etc		30	50	1,[illegible]		1,50	119	1,[illegible]		2,[illegible]	38			600		44		682
Horton		37	10	3,[illegible]	67	1,[illegible]		200	770	3,[illegible]	1,208			770		200	40	2,218
McNab		951	70	10,9[illegible]	1,[illegible]	1,[illegible]		700		3,840	1,[illegible]	93		2,000			50	3,410
Pembroke		19		1,[illegible]	505	6,2[illegible]		1,000		2,[illegible]	278	321		240			56	895
Petawawa		21		1,[illegible]	207					207	113			800				913
Radcliffe & Raglan		7	28	3,[illegible]	99	1,[illegible]				1,[illegible]	3 0	1 28						1,615
Ross		129	80	6,041	1,18[illegible]			1,000	1,747	3,[illegible]				1,746				1,746
Sebastopol			2	2,[illegible]	347	840				1,[illegible]	18[illegible]							187
Stafford	13[illegible]	1	2[illegible]	2,[illegible]	603	57[illegible]				1,[illegible]	6[illegible]	201					169	1,062
Westmeath		278	68	11,[illegible]	1,[illegible]			14,[illegible]		16,[illegible]				4,430				4,430
Wilberforce, etc			28	4,[illegible]	1,2	1,[illegible]				2,[illegible]	1,0 0	283		500			309	2,142
Totals	[illegible]	1,934	970	78,[illegible]	9,[illegible]	25,[illegible]	3,[illegible]	70,200	3,[illegible]	71,533	10,418	6,766	2,000	14,711	1,800	848	2,843	39,386

* Due sinking fund.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Receipts.								Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Buildings and other works.	Support of the poor and other charities.	County treasurer for levy.	Payments on account of schools and education.	Drainage work.	Sinking fund and other investments.	Debentures redeemed.
LANARK:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Bathurst	6,682	6	39	.....	.....	.....	461	7,188	423	261	304	.....	44	1,837	3,514	.....	.....	.....
Beckwith	5,112	58	340	.....	.....	.....	962	6,472	495	103	1,227	.....	30	1,388	2,730	.....	.....	.....
Burgess N	2,346	5	.....	.....	.....	.....	696	3,047	206	63	204	.....	....	968	1,295	11	.....	.....
Dalhousie, etc	4,443	53	.....	.....	.....	.....	1,138	5,634	318	114	783	.....	23	713	2,386	.....	.....	100
Darling	1,050	11	16	.....	.....	.....	263	1,356	157	45	91	.....	30	227	462	.....	.....	.....
Drummond	7,896	72	....	1,150	.....	190	49	9,357	369	182	1,541	.....	20	1,859	3,673	917	.....	150
Elmsley N	4,464	.....	.....	700	.....	.....	74	5,238	356	130	1,155	.....	.....	781	2,001	713	.....	.....
Lanark	4,375	15	.....	29	....	.....	518	4,937	253	153	610	.....	28	1,052	2,736	.....	.....	.....
Lavant	1,595	30	.....	.....	.....	.....	139	1,764	286	48	69	.....	28	192	840	.....	.....	.....
Montague	5,491	13	....	.....	.....	.....	114	5,618	363	197	576	.....	23	1,424	1,212	63	....	100
Pakenham	6,999	136	.....	.....	.....	.....	1,822	8,957	552	114	1,748	.....	82	1,262	4,129	....	.....	377
Ramsay	8,683	148	350	.....	.....	.....	2,317	11,498	640	332	1,905	.....	231	1,787	4,442	184	.....	.....
Sherbrooke S	1,792	72	.....	.....	.....	.....	71	1,935	283	123	261	.....	22	114	775	.....	.....	.....
Totals	60,938	619	745	1,879	.....	190	8,629	73,000	4,801	1,865	10,524	.....	561	13,504	29,595	1,888	.....	727
VICTORIA:																		
Bexley	5,088	63	.....	1,000	.....	.....	700	6,851	306	341	.....	.....	120	500	2,154	.....	135	100
Carden	2,434	5	.....	249	....	.....	100	2,788	246	107	165	.....	164	355	1,250	.....	.....	.....
Dalton	1,193	.....	.....	.....	.....	.....	307	1,500	177	79	190	..	5	226	587	.....	.....	.....
Eldon	11,948	259	196	.....	.....	.....	123	12,566	619	359	1,649	....	232	2,749	4,389	.....	1,380	79
Emily	11,585	.....	.....	1,500	.....	.....	171	13,256	756	69	1,375	.....	149	3,766	4,699	.....	.....	.....
Fenelon	9,847	104	.....	19	.....	.....	95	10,065	521	90	567	.....	188	3,248	5,131	.....	.....	.....
Laxton, etc	2,666	26	270	.....	.....	.....	71	3,033	258	133	146	108	....	475	1,118	.....	285	.....
Mariposa	25,493	9	.....	.....	1,400	.....	2,919	29,821	996	239	1,387	.....	484	9,268	9,468	1,162	.....	710
Ops	15,811	.....	45	500	.....	1,078	5,713	23,147	1,020	154	4,318	....	112	1,342	4,766	1,045	.....	1,410
Somerville	7,051	156	8,905	.....	.....	.....	293	16,405	546	96	571	.....	64	949	2,905	.....	.....	10,101
Verulam	7,952	.....	1	.....	650	.....	1,459	10,062	650	280	2,047	.....	32	2,502	3,299	.....	120	530
Totals	101,108	622	9,417	3,268	2,050	1,078	11,951	129,494	6,095	1,947	12,415	108	1,550	25,372	39,766	2,207	2,049	12,959
PETERBOROUGH:																		
Asphodel	7,782	5	51	200	....	.....	302	8,340	430	112	880	.....	62	2,785	3,129	.....	167	179
Belmont, etc	4,902	.....	.....	100	.....	.....	282	5,284	458	104	310	.....	194	510	2,696	.....	.....	86

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Disbursements.—*Continued.*				Assets.						Liabilities.							
	Refund of moneys borrowed for current expenses.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, building and other property.	Miscellaneous	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
LANARK :	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Bathurst	.....	.....	55	6,438	750	527	780	600	.....	2,657	310	....	.....	.....	.....	.....	.....	310
Beckwith	.....	.....	18	5,941	531	1,399	3,600	.....	...	5,530	190	....	.....	.....	.....	.....	.....	190
Burgess N	.....	.....	38	2,785	262	113	.....	600	....	975	115	52	.....	.....	.....	.....	54	221
Dalhousie, etc	.....	10	79	4,526	1,108	341	.....	5,900	.....	7,349	254	.....	.....	100	.....	.....	40	394
Darling	150	16	4	1,182	173	866	200	62	.....	1,301	89	606	.....	.....	.....	.....	72	767
Drummond	700	63	119	8,963	394	539	.....	.....	.....	933	248	.....	.....	.....	880	450	.....	1,578
Elmsley N	.....	.....	11	5,147	91	755	.....	400	19	1,265	..	364	.....	.....	.....	700	..	1,064
Lanark	.....	.....	25	4,937	....	872	.....	300	.....	1,172	215	.....	.....	.....	.....	29	267	511
Lavant	170	6	37	1,676	88	166	.....	.....	.....	254	.....	.....	.....	.....	.....	.....	.....	.....
Montague	.....	36	123	4,117	1,501	4,311	.....	500	.....	6,312	1,186	2,657	.....	500	.....	.....	.....	4,343
Pakenham	.....	230	80	8,574	383	1,862	.....	1,000	.....	3,245	236	.....	.....	4,453	.....	.....	114	4,803
Ramsay	.....	.....	151	9,722	1,776	1,133	† 7,660	800	185	11,554	264	350	.....	.....	.....	.....	.....	614
Sherbrooke S	.....	.....	37	1,615	320	704	.....	.....	.....	1,024	296	95	.....	.....	.....	.....	16	408
Totals	1,020	361	777	65,623	7,377	13,588	12,240	10,162	204	43,571	3,403	4,125	.....	5,053	880	1,179	563	15,203
VICTORIA :																		
Bexley	2,000	440	102	6,218	633	1,809	355	5,300	.....	8,097	566	386	7,000	1,100	475	.....	.....	9,467
Carden	249	17	88	2,641	147	697	.....	.....	.....	844	478	292	.....	.....	.....	.....	12	782
Dalton	.....	.....	3	1,267	233	302	.....	.....	.....	535	257	90	.....	.....	.....	.....	94	441
Eldon	72	950	96	12,566		3,900	3,414	.....	.....	7,314	2,739	.....	17,000	1,406	.....	* 1,461	.....	22,606
Emily	1,800	59	31	12,704	552	.....	.....	.....	.....	552	.....	.....	.....	.....	.....	.....	20	20
Fenelon	105	.....	215	10,065	.....	5,235	.....	.....	.....	5,235	3,245	860	.....	.....	.....	19	350	4,474
Laxton, etc	.....	250	27	2,900	133	142	3,425	.....	.....	8,700	482	781	5,000	.....	.....	.....	.....	6,263
Mariposa	.....	367	217	24,298	5,523	7,486	.....	4,350	.....	17,359	4,872	.....	.....	3,626	4,742	.....	.....	13,234
Ops	500	423	275	15,395	7,752	1,516	.....	1,000	6,812	17,080	5 149	53	.....	1,719	6,797	.....	.....	13,718
Somerville	..	813	219	16,263	142	5,098	2,477	3,350	..	11,067	951	2,356	10,000	121	.....	.....	193	13,021
Verulam	..	116	203	9,779	283	6,265	120	240	485	7,393	2,496	2,232	.....	1,850	.....	.....	2,196	8,774
Totals	4,726	3,435	1,476	114,096	15,398	33,409	9,791	14,240	7,297	79,126	21,175	7,050	39,000	9,816	12,014	1,480	2,865	93,400
PETERBOROUGH :																		
Asphodel	260	221	115	8,280	60	371	1,446	1,700	150	3,727	234	..	1,244	3,358	.....	.....	165	4,998
Belmont, etc	410	132	249	5,149	135	2,777	.....	.....	.....	2,912	1,391	488	.....	2,117	.....	102	198	4,296

† Bank Stocks. * Due sinking fund.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Receipts.								Disbursements.								
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Buildings and other works.	Support of the poor and other charities.	County treasurer for levy.	Payments on account of schools and education	Drainage work.	Sinking fund and other investments.	Debentures redeemed.
PETERBORO'—*Con*	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Burleigh, etc.	3,128	15	840		925		145	5,053	551	114	284		56	406	2,490			150
Douro	6,785			600			2,724	10,109	479	79	1,193		75	4,778	2,553			323
Dummer	5,919	4					315	6,238	464	84	729		168	1,618	2,506			
Ennismore	3,396						29	3,425	234	77	390		72	1,010	1,603			
Galway, etc.	1,432						265	1,697	213	88	185		8	69	831			70
Harvey	3,336	32					19	3,387	489	82	549		115	582	1,474			38
Monaghan N	5,217	40		200			154	5,611	203	380	243	22		1,436	1,087			31
Otonabee	14,410	19	88				4,672	19,189	594	168	2,340		356	5,274	5,739			97
Smith	10,599	93					3,088	13,780	479	149	1,630		392	4,046	3,953			
Tota'ls	66,906	208	979	1,100	925		11,995	82,113	4,594	1,437	8,733	22	1,498	22,514	27,861		167	974
HALIBURTON:																		
Anson, etc	766	28					131	925	188	68	84				441			76
Cardiff	1,228						7	1,235	151	5	188			260	571			
Dysart, etc.	7,999	71					504	8,574	475	213	782		85	3,495	2,020			80
Glamorgan	1,312	24			400		42	1,778	181	138	63		13	204	877			
Lutterworth	1,473			75			127	1,675	195	52	108			577	565			
Minden	3,052	48					26	3,126	303	35	208		21	796	1,587			27
Monmouth	1,504						1	1,505	162	38	61		172	540	449			
Snowdon	2,744	24					348	3,116	275	83	179		48	809	1,342			74
Stanhope, etc.	1,272	53					396	1,721	262	64	50		34	208	535			
Totals	21,350	248		75	400		1,582	23,655	2,197	696	1,723		373	6,889	8,397			257
HASTINGS:																		
Bangor, etc.	1,223	26					312	1,561	266	47	178			295	633			
Carlow	1,909					400	379	2,778	398	20	604			265	599			270
Dungannon	1,924	24					272	2,220	181	18	217			295	1,099			101
Elzevir, etc	2,707	66	15				507	3,295	348	43	651		141	117	1,843			
Faraday	1,592	268					331	2,191	170	52	374			234	1,069		3	45
Hungerford	12,478	270		340			434	13,522	841	310	1,209		136	5,855	4,601			274
Huntingdon	8,192	30			400		499	9,121	573	96	257		108	3,396	3,826			121
Limerick	1,471	276					609	2,356	280	71	742			81	743			

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Disbursements.—*Continued.*				Assets.						Liabilities.							
	Refund of moneys borrowed for current expenses.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
PETERBORO'—*Con*	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Burleigh, etc.	426	195	883	5,053	....	807	.....	500	800	2,107	178	417	.....	1,130	.....	1,840	.....	3,565
Douro	600	112	50	10,042	67	547	.....	400	28	1,042	.....	.....	.....	1,268	.....	.....	.....	1,268
Dummer	....	.....	249	5,818	470	964	.....	.....	.....	1,384	.....	26	.....	.....	.....	.....	.....	26
Ennismore	....	.....	.....	3,386	39	3,270	.....	3,400	....	6,709	1,011	240	.....	.....	.....	.....	100	1,351
Galway, etc.	.....	8	26	1,498	199	2,542	.....	.....	.....	2,741	219	960	.....	90	.....	.....	.....	1,269
Harvey	14	22	1	3,366	21	2,225	.....	50	46	2,342	584	538	.....	512	.....	.....	260	1,894
Monaghan N.	1,403	18	226	5,049	564	1,879	.....	3,550	.....	5,491	1,141	27	.....	.....	225	.....	.....	1,393
Otonabee	.....	27	53	14,648	4,541	3,744	.....	3,600	....	11,885	5,224	39	.....	361	.....	.....	351	5,975
Smith	.....	.....	40	10,689	3,691	4,228	.....	.....	....	7,319	4,058	....	.....	.....	.....	.....	31	4,089
Totals	3,053	733	1,392	72,978	9,135	22,854	1,446	13,200	1,024	47,659	14,343	2,735	1,241	8,836	225	1,942	1,105	30,427
HALIBURTON:																		
Anson, etc.	5	52	11	925	.....	747	.....	.....	74	821	119	314	.....	725	.....	.....	48	1,206
Cardiff	.....	.....	50	1,725	10	1,730	.....	.....	.....	1,740	227	622	.....	.....	.....	.....	.....	849
Dysart etc.	500	61	78	7,709	775	6,540	.....	.....	.....	7,315	3,808	2,327	.....	240	.....	500	.....	6,875
Glamorgan	.....	.....	130	1,605	172	1,843	.....	.....	.....	2,015	719	508	.....	400	.....	.....	183	1,810
Lutterworth	104	8	19	1,624	51	1,276	.....	.....	181	1,508	465	540	.....	.....	.....	77	93	1,175
Minden	28	17	65	3,057	39	4,316	.....	68	....	4,423	1,872	1,393	.....	180	.....	.....	456	3,901
Monmouth	.....	.....	22	1,444	61	280	.....	395	.....	736	1,122	518	.....	.....	.....	.....	.....	1,640
Snowdon	.....	42	80	2,952	184	3,737	.....	.....	741	4,662	1,903	1,179	.....	583	.....	.....	118	3,783
Stanhope, etc.	350	41	7	1,551	170	1,009	.....	.....	54	1,233	158	470	.....	100	.....	.....	58	786
Totals	978	221	462	22,193	1,462	21,478	.....	463	1,050	24,453	10,393	7,881	.....	2,228	.....	577	956	22,035
HASTINGS:																		
Bangor, etc	.....	.....	7	1,366	195	2,350	.....	.....	.....	2,545	188	1,501	.....	.....	.....	.....	167	1,856
Carlow	.....	70	91	2,418	360	1,386	.....	50	1,522	3,318	228	795	.....	859	400	.....	37	2,659
Dungannon	.....	68	70	2,044	176	1,597	.....	.....	944	2,717	200	1,167	.....	920	.....	.....	140	2,427
Elzevir, etc	.....	52	4	3,199	96	3,020	.....	800	.....	3,916	869	2,070	.....	.....	.....	.....	.....	2,939
Faraday	125	24	.....	2,095	95	2,119	3	.....	360	2,577	238	1,472	.....	360	.....	258	284	2,612
Hungerford	37	245	14	13,502	.....	9,724	.....	12,000	.....	21,724	4,392	3,273	.....	2,540	.....	340	1,024	11,569
Huntingdon	.....	4	58	8,434	687	4,623	.....	500	.....	5,810	2,988	634	.....	400	.....	.....	.....	4,022
Limerick	.....	.....	92	2,009	347	1,725	.....	.....	.....	2,072	238	462	.....	.....	.....	.....	123	823

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Receipts.								Disbursements								
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Buildings and other works	Support of the poor and other charities.	County treasurer for levy.	Payments on account of schools and education.	Drainage work.	Sinking fund and other investments.	Debentures redeemed.
HASTINGS—*Con.*	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Madoc	11,075	56					632	11,763	514	196	651		113	4,131	1,631			294
Marmora & Lake	7,406	220			1,030		409	9,065	507	232	849		98	2,263	4,086			249
Mayo	1,088						500	1,588	175	154	213			153	803			
Monteagle, etc.	2,359						252	2,611	249	74	129			211	1,751			
Rawdon	13,269	112	80				1,341	14,802	600	199	586		322	5,937	6,676			
Sidney	21,937	177		650			748	23,512	747	269	425		999	10 645	6,693			
Thurlow	19,974	128					1,297	21,399	720	670	973		706	8,896	7,089			2,048
Tudor & Cashel	2,165	77		84			388	2,714	282	131	497		13	329	1,341			96
Tyendinaga	18,074	194	3				1,794	20 065	1,001	402	1,203		267	9,294	6,543			100
Wollaston	1,907						260	2,167	351	53	332		15	223	1,105			35
Totals	130,840	1,924	98	1,074	1,430	400	10,964	146,730	8,143	3,037	10,090		2,918	52.721	52,031		3	3,633
MUSKOKA :																		
Brunel	1,949	2	30				118	2,099	228	103	398		7		1,059			
Cardwell	881	10					243	1,134	179	63	41		20		489		25	
Chaffey	2,967			1,637			561	5,165	411	261	554		70		1,629			128
Draper	2,762	40			600		1,045	4 447	269	53	600		106		2,331			100
McLean&Ridout	1,383	55			200		409	2,047	240	84	158	42	47		844			50
Macaulay	2,948	30					1,121	4,099	271	105	728				2,068			
Medora & Wood.	3,131	80					306	3,517	285	152	675				2,123			
Monck	2,008	53					143	2,204	295	80	376				1,226			30
Morrison	1,596	96	15				593	2,300	222	84	337		3		1,287			
Muskoka	1,183						719	1,902	306	69	211		80		955		35	
Oakley	749						436	1,185	185	38	243		18		474			150
Ryde	1,736	15		200			32	1,983	216	71	233		5		1,057			50
Stephenson	1,206	74	13	350			970	2,613	263	116	950	369	55		595		184	
Stisted	1,733	8	200				78	2,019	218	91	320				856		60	
Watt	1,865	12			400		283	2,560	226	71	195	3			1,753		191	
Totals	28,097	475	258	2,187	1,200		7,057	39,274	3,814	1,441	6,019	414	411		18,746		495	508

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Disbursements—*Continued.*				Assets.						Liabilities.							
	Refund of moneys borrowed for current expenses.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
HASTINGS—*Con.*	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Madoc	848	2,351	47	10,676	1,087	8,550	.....	630	5,724	16,011	4,047	3,606	37,200	.....	1,714	.....	500	46,967
Marmora & Lake	.....	181	377	8,842	223	3,261	.....	1,900	.....	5,384	2,199	909	.....	3,824	.....	.....	568	7,500
Mayo	.....	.....	73	1,571	17	1,520	.....	1,200	.....	2,737	150	993	.....	.....	.....	.....	187	1,330
Monteagle, etc.	.....	.....	.....	2,414	197	571	195	.....	233	1,196	213	144	.....	.....	.....	.....	.....	357
Rawdon	.....	.....	358	14,678	124	8,163	.....	.....	28	8,312	5,699	.....	.....	.....	.....	1,590	80	7,369
Sidney	1,285	9	219	21,291	2,221	9,712	.....	1,000	.....	12,933	11,241	.....	.....	.....	.....	.....	.....	11,241
Thurlow	.....	198	41	21,341	58	13,930	.....	2,000	.....	15,988	10,339	2,490	.....	.....	1,725	.....	116	14,670
Tudor & Cashel	.....	25	.....	2,714	.....	2,519	.....	.....	.....	2,519	312	1,457	.....	329	.....	83	.....	2,181
Tyendinaga	.....	6	72	18,888	1,177	7,422	.....	.....	26	8,625	4,599	.....	.....	.....	.....	.....	503	5,102
Wellington	.....	3	21	2,138	29	1,676	.....	3,278	.....	4,983	291	958	.....	.....	.....	.....	99	1,348
Totals	2,295	3,231	1,539	139,641	7,089	83,868	198	23,378	8,834	123,367	48,491	21,831	37,200	9,232	3,839	2,271	4,164	127,028
MUSKOKA:																		
Brunel	.....	.....	8	1,803	296	2,790	.....	1,877	.....	4,963	.....	779	.....	.....	.....	.....	.....	779
Cardwell	.....	17	183	1,917	117	800	150	.....	141	1,208	.....	461	.....	250	.....	.....	176	887
Chaffey	1,900	96	118	5,165	.....	3,499	.....	5,000	.....	8,499	.....	.....	.....	430	.....	1,853	.....	2,283
Draper	.....	25	24	3,508	939	.....	.....	.....	44	983	.....	171	.....	500	.....	.....	8	679
McLean & Ridout	300	41	159	1,962	85	.....	.....	1,600	.....	1,685	.....	.....	.....	200	400	.....	.....	600
Macaulay	.....	.....	81	3,253	846	533	.....	1,950	50	3,379	.....	.....	.....	.....	.....	.....	457	457
Medora & Wood	.....	.....	56	3,791	226	3,244	.....	.....	.....	3,470	.....	2,360	.....	.....	.....	.....	754	3,114
Monck	.....	17	8	2,032	172	55	.....	.....	.....	227	.....	104	.....	180	.....	.....	.....	284
Morrison	.....	.....	.....	1,983	367	1,270	.....	1,150	.....	2,787	.....	953	.....	.....	.....	.....	.....	953
Muskoka	.....	25	15	1,696	206	90	.....	1,000	.....	2,106	.....	278	.....	350	.....	.....	155	783
Oakley	.....	9	1	1,148	67	153	.....	400	.....	620	.....	.....	.....	.....	.....	.....	.....	.....
Ryde	.....	19	114	1,765	218	1,475	.....	.....	10	1,703	.....	1,225	.....	100	.....	200	.....	1,525
Stephenson	.....	54	27	2,613	.....	1,543	678	1,100	.....	3,321	.....	875	.....	900	.....	350	71	2,196
Stisted	.....	36	2	1,077	442	518	.....	213	.....	1,173	.....	.....	.....	600	.....	200	.....	800
Watt	.....	30	12	2,481	79	796	191	2,700	.....	3,766	.....	453	.....	900	.....	.....	.....	1,353
Totals	2,203	363	800	35,214	4,030	17,546	1,019	16,990	245	39,860	.....	7,659	.....	4,410	400	2,603	1,621	16,693

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES—*Continued.*

Municipalities.	Receipts.								Disbursements.								
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	R fund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Buildings and other works.	Support of the poor and other charities.	County treasurer for levy.	Payments on account of schools and education	Drainage work.	Sinking fund and other investments.	Debentures redeemed.
PARRY SOUND:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Armour	2,469	22	.....	.....	.....	.....	1,032	3,523	269	128	204	.....	24	.....	1,992	.....	.....	79
Chapman	972	182	.....	.....	.....	.....	773	1,927	252	125	461	.....	6	.....	628	.....	.....	100
Christie	45	.....	.....	.....	.....	.....	45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foley	1,165	133	.....	200	.....	.....	489	1,988	235	56	214	.....	19	.....	715	.....	.....	.....
Hagerman	1,052	22	.....	.....	.....	.....	410	1,484	134	95	127	.....	.....	.....	640	.....	.....	.....
Himsworth N	518	93	.....	.....	1,600	.....	375	2,586	153	81	249	.....	.....	.....	1,900	.....	.....	.....
Himsworth S	2,718	144	.....	.....	.....	.....	231	3,093	235	134	118	.....	.....	.....	1,623	.....	.....	197
Humphrey	1,124	103	.....	.....	.....	.....	432	1,659	223	83	227	1	.....	.....	961	.....	.....	.....
Joly	618	.....	.....	.....	.....	.....	120	738	175	102	123	.....	.....	.....	188	.....	.....	.....
McDougall	1,625	3	.....	.....	.....	.....	147	1,775	214	127	342	.....	.....	.....	548	.....	.....	.....
McKellar	2,155	35	.....	25	.....	.....	256	2,571	251	104	468	.....	20	.....	943	.....	.....	295
McMurrich	1,574	33	.....	.....	.....	.....	724	2,331	277	158	130	63	.....	.....	1,128	.....	.....	.....
Machar	2,172	21	.....	.....	.....	.....	306	2,499	287	64	146	.....	10	.....	1,438	.....	.....	46
Nipissing	1,060	25	.....	.....	.....	.....	.....	1,085	141	213	2	.....	25	.....	600	.....	.....	.....
Perry	2,693	79	.....	.....	.....	.....	406	3,178	249	178	560	80	14	.....	1,715	.....	.....	.....
Ryerson	1,752	2	.....	.....	.....	.....	265	2,019	231	85	76	19	.....	.....	1,030	.....	.....	79
Strong	1,788	.....	.....	.....	.....	.....	222	2,010	219	70	255	.....	.....	.....	955	.....	.....	161
Totals	25,501	897	.....	225	1,600	.....	6,288	34,511	3,545	1,803	3,732	163	118	.....	17,074	.....	.....	957
NIPISSING:																		
Bonfield	1,417	139	.....	.....	.....	.....	211	1,767	264	141	74	.....	.....	.....	1,029	.....	.....	.....
Caldwell	386	28	.....	.....	.....	.....	414	814	81	69	184	.....	.....	.....	.....	.....	.....	.....
Calvin	1,190	7	.....	.....	.....	.....	75	1,272	163	30	34	20	10	.....	841	.....	.....	.....
Cameron	497	.....	.....	.....	.....	300	36	833	98	52	308	.....	.....	.....	292	.....	.....	.....
Ferris	928	.....	.....	.....	.....	.....	371	1,299	278	76	19	.....	.....	.....	317	.....	.....	121
McKim	1,875	25	.....	.....	1,200	.....	1,531	4,631	372	92	478	.....	36	.....	2,546	.....	.....	.....
Mattawan	306	.....	.....	.....	.....	.....	10	316	23	12	13	.....	20	.....	60	.....	.....	.....
Papineau	504	.....	.....	.....	.....	.....	266	770	213	30	17	.....	4	.....	491	.....	.....	.....
Springer	2,783	503	.....	700	3,000	.....	.....	6,986	332	152	1,122	.....	12	.....	3,995	.....	.....	.....
Widdifield	1,307	4	.....	.....	.....	.....	52	1,363	285	249	238	281	.....	.....	250	.....	.....	.....
Totals	11,193	706	.....	700	4,200	300	2,552	19,651	2,109	903	2,487	301	82	.....	9,824	.....	.....	121

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES—*Continued.*

Municipalities.	Disbursements—*Continued.*				Assets.						Liabilities.							
	Refund of moneys borrowed for current expenses.	Interest on loans, advances and debentures	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stock, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
PARRY SOUND:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Armour		21	111	2,828	695	2,326			29	3,050		907		267			21	1,195
Chapman		7	82	1,661	266	1,024			87	1,377		675					33	708
Christie					45					45								
Foley	200	8	20	1,497	491	401		135		1,027		545					35	580
Hagerman			38	1,034	450	330				780		506					92	598
Humsworth, N			10	2,533	53	620		2,300		2,973				1,600				1,600
Humsworth, S		172	29	2,772	321	1,945				2,266		1,300		2,683			240	4,223
Humphrey				1,495	164	1,316		1,757	15	3,252		225						225
Joly	105	3	4	700	38	1,052				1,090		477					78	555
McDougall			30	1,281	494	943		35		1,472		176						176
McKellar		36	113	2,230	341	1,272				1,613		671		300		25	60	1,056
McMurrich			32	1,788	543	2,307		63		2,913		1,165					120	1,285
Machar		104	59	2,154	345	1,422		280		2,047		720		1,654			288	2,662
Nipissing	5		99	1,085		1,009				1,009							64	64
Perry			146	2,942	236	2,807				3,043		1,772					236	2,008
Ryerson		55	81	1,656	363	2,362		19		2,744		1,293		728			132	2,153
Strong		43	77	1,780	230	1,848				2,078		638		545				1,183
Totals	310	449	1,285	29,436	5,075	22,984		4,589	131	32,779		11,070		7,777		25	1,399	20,271
NIPISSING:																		
Benfield			94	1,602	165	1,598				1,763		1,169					36	1,205
Caldwell				334	80	16				96								
Calvin			115	1,216	56	1,006		20		1,082		732					85	817
Cameron				750	83	97		5		185		57			300			357
Ferris	200	47	105	1,163	136	2,146				2,282		361			564		26	951
McKim				3,524	1,107	1,694		1,500		4,301		1,543		1,200				2,743
Mattawan	120			248	68	406	250			724		160					112	272
Papineau			4	759	11	663				674		225					61	286
Springer	700	42	563	6,918	68	3,861				3,929		788		3,000		636	2,000	6,424
Widdifield			6	1,309	54	1,001		281		1,336		250						250
Totals	1,020	89	887	17,823	1,828	12,488	250	1,806		16,372		5,285		4,200	864	636	2,320	13,305

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Receipts.								Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Buildings and other works.	Support of the poor and other charities.	County treasurer for levy.	Payments on account of schools and education.	Drainage work.	Sinking fund and other investments.	Debentures redeemed.
MANITOULIN:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Assiginack	3,142	170		200			217	3,729	205	152	208		28		2,226			250
Billings	1,212	54					483	1,749	173	249	100				495			
Burpee	779	4					4	787	120	136	23				320			
Carnarvon	1,184			136				1,320	69	64	198				800			83
Cockburn Island	714						710	1,424	164	66	230				439			
Gordon	1,731						391	2,122	247	75	83				1,226			
Howland	2,859	27		300				3,186	268	68	82				1,300			
Sandfield	880			60			115	1,055	102	36	22				640			
Tehkummah	995	9					13	1,017	157	46	49				701			
Totals	13,496	264		696			1,933	16,389	1,505	892	995		28		8,147			333
ALGOMA:																		
Balfour	968	162		500			60	1,690	238	29	386				532			
Drury, etc	598	52		528	500		2	1,680	227	38	24				500			
Hallam	1,124	547		200			76	1,947	57	169	200	200						
Hilton	1,054	65	12				914	2,045	229	131	195				520			600
Jocelyn	2,188	1	2				4	2,195	285	120	239				1,295		30	
Johnston, etc	1,575		3	200	700		129	2,607	183	29	621				1,120			
Laird	1,024	1		260			44	1,329	99	67	194				693			
Macdonald, etc	743						233	976	105	56	273				341			
Plummer Add'l	1,293	192					473	1,958	161	42	120		2		1,075			
Rayside	1,104	46		55			84	1,289	216	52	37				565			
St. Joseph	2,169	75					98	2,342	252	23	336		103		1,387			39
Salter, May, etc	1,034	115					32	1,181	295	155	25				275			
Sault Ste. Marie	5,033						401	5,434	466	*2,040	1,187	54	36		1,225			
Thessalon	963	16					118	1,097	213	93	186		103		328			
Totals	20,870	1,272	17	1,743	1,200		2,668	27,770	3,026	3,044	4,022	254	244		9,856		30	639

* Including $1,747 in law costs *re* tax sale

TABLE VII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities	Disbursements.—*Continued.*				Assets.						Liabilities.							
	Refund of moneys borrowed for current expenses.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
MANITOULIN:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Assiginack	200	41	64	3,474	355	1,931	.....	3,280	150	5,716	...	1,020	.....	300	.....	.....	48	1,368
Billings	.....	.....	279	1,296	453	536	.....	.....	.....	989	.....	3 0	.....	.....	.....	.....	19	369
Burpee	.....	150	.....	719	68	150	.....	.....	.....	198	.....	120	.....	.....	2,000	.....	.....	2,120
Carnarvon	28	44	34	1,324	.....	3,240	.....	.....	.....	3,240	.....	864	.....	617	.....	136	176	1,793
Cockburn Island	.....	.....	22	941	503	70	.....	15	.....	1,238	.....	347	.....	.....	.....	.....	.....	347
Gordon	.....	.....	249	1,880	242	1,516	.....	2,000	.....	3,758	.....	871	.....	.....	.....	.....	43	914
Howland	300	23	324	2,365	821	604	.....	.....	.....	1,425	.....	566	.....	723	.....	.....	.....	1,289
Sandfield	.....	.....	9	809	246	2,529	.....	.....	.....	2 775	.....	734	.....	.....	.....	63	13	810
Tehkummah	.....	.....	.....	953	64	1,149	.....	.....	.....	1,205	.....	565	.....	.....	.....	.....	58	623
Totals	528	228	981	13,637	2,752	12,345	.....	5,295	150	20,542	.....	5,437	.....	1,640	2,000	199	357	9,633
ALGOMA:																		
Baltour	400	24	66	1,675	15	1,640	.....	125	.....	1,780	.....	756	.....	.....	.....	100	.....	856
Drury, etc	.....	28	*300	1,147	563	1,137	.....	600	.....	2,300	.....	.....	.....	500	.....	528	.....	1,028
Hallam	.....	.....	69	695	1,272	173	.....	.....	.....	1,425	.....	560	.....	.....	.....	200	179	879
Hilton	.....	48	226	1,949	96	1,186	.....	630	25	1,937	.....	569	.....	.....	.....	.....	193	753
Jocelyn	.....	42	19	2,030	165	2,629	58	.....	†526	3,378	...	1,401	.....	600	.....	.....	212	2,213
Johnston, etc	500	24	41	2,518	89	1,255	.....	.....	.....	1,344	.....	580	.....	700	.....	202	116	1,598
Laird	150	12	8	1,223	105	339	.....	380	.....	826	.....	.....	.....	.....	.....	260	62	322
Macdonald, etc	.....	.....	.....	775	201	764	.....	.....	.....	965	.....	187	.....	.....	.....	.....	.....	187
Plummer Add'l	.....	.....	90	1,490	468	667	.....	.....	.....	1,135	.....	500	.....	.....	.....	.....	.....	500
Rayside	330	27	26	1,255	36	495	.....	350	.....	881	.....	469	.....	.....	.....	.....	.....	469
St. Joseph	.....	49	136	2,324	18	3,109	.....	.....	.....	3,127	.....	1,378	.....	659	.....	.....	138	2,175
Salter, May, etc	150	.....	.....	900	281	167	.....	.....	.....	448	.....	275	.....	.....	.....	.....	.....	275
Sault Ste. Marie	.....	.....	163	5,171	203	9,585	.....	160	.....	9,948	.....	1,525	.....	.....	.....	.....	220	1,745
Thessalon	.....	.....	55	978	119	1,156	.....	750	.....	2,025	.....	.....	.....	.....	.....	.....	.....	.....
Totals	1,530	254	1,199	24,098	3,672	24,302	58	2,935	551	31,518	.....	8,131	.....	2,459	.....	1,290	1,120	13,000

* Refund of "loan for current expenses" in 1893, for which year no returns were made.

† Tax sale lots in hands of Township.

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Receipts.								Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Other expenses of municipal government.	Roads and bridges.	Buildings and other works.	Support of the poor and other charities.	County treasurer for levy.	Payments on account of schools and education.	Drainage work.	Sinking fund and other investments.	Debentures redeemed.
THUNDER BAY:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Neebing	3,554	....	.....	2,000	.....	.....	807	6,361	582	202	2,646	....	.....	.....	356	.....	.....	.....
Oliver	1,719	23	.....	500	.....	.....	200	2,442	259	245	134	....	.....	.....	792	.....	.....	.....
Shuniah	1,356	..	.....	2,300	.....	.....	574	4,230	910	241	475	.....	.....	.....	.....	.....	900	.....
Totals	6,629	23	....	4,800	.....	.....	1,581	13,033	1,751	688	3,255	.....	.....	.....	1,148	.....	900	.....
RAINY RIVER:																		
Alberton	508	209	.....	.....	.....	.....	37	754	147	.....	.....	.....	.....	.....	329	.....	.....	.....
Keewatin	2,076	460	....	175	.....	.....	54	2,765	350	128	110	.....	50	.....	1,665	.....	.....	240
Totals	2,584	669	.....	175	.....	.....	91	3,519	497	128	110	....	50	.....	1,994	.....	....	240

TABLE VIII. FINANCIAL STATEMENT—TOWNSHIP MUNICIPALITIES.—*Continued.*

Municipalities.	Disbursements.—*Continued.*				Assets.						Liabilities.							
	Refund of moneys borrowed for current expenses.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
THUNDER BAY:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Neebing	1,100	774	83	5,743	618	4,255	.....	625	172	5,670	.....	.....	10,500	.....	.....	1,500	367	12,367
Oliver	600	165	1	2,196	246	644	.....	2,050	.....	2,940	.....	.....	.....	.....	.....	600	.....	600
Shuniah	1,000	577	30	4,133	97	5,843	7,000	65	*2,582	15,587	.....	.....	7,500	.....	.....	†6,750	376	14,626
Totals	2,700	1,516	114	12,072	961	10,742	7,000	2,740	2,754	24,197	.....	.....	18,000	.....	.....	8,850	743	27,593
RAINY RIVER:																		
Alberton	252	.....	.....	728	26	1,107	.....	.....	.....	1,133	.....	418	.....	.....	.....	.....	.....	418
Keewatin	.....	192	30	2,765	.....	464	.....	810	.....	1,274	.....	.....	.....	2,785	.....	175	43	3,003
Totals	252	192	30	3,493	26	1,571	.....	810	.....	2,407	.....	418	.....	2,785	.....	175	43	3,421

* Lands purchased at tax sale and held for redemption. † Including $2,850 due sinking fund.

FINANCIAL STATEMENT—TOWN MUNICIPALITIES.

TABLE IX. Showing the Receipts, Disbursements, Assets and Liabilities of the town municipalities in the Province of Ontario, for the year ending Dec. 31, 1894.

Towns.	Receipts.									Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water rates, electric light rates, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Streets, bridges and parks.	Buildings and other works.	Support of the poor and other charities.	Administration of justice, including police services.	County treasurer for levy.	Payments on account of schools and education.	Sinking fund and other investments.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
ESSEX :																			
Amherstburg	12,213	7 6	3,159	.....	26,000	.....	5,000	205	47,303	1,022	2,192	706	2,483	522	325	287	650	2,710	.....
Essex	11,4 7	283	1,075	*4,886	1,450	.....	.....	343	19 574	257	1,853	468	428	453	.....	.....	5 9	3,950	.....
Leamington	8 2 9	420	210	.....	5,345	.....	.....	1,986	16,200	544	1,822	496	488	508	111	11	601	2,500	.....
Sandwich	5,959	449	659	.....	2,245	.....	4,000	2,149	15,461	867	1,888	810	4,9 6	301	82	.....	487	2,515	.....
Walkerville	29,406	355	.....	41	11,000	.....	.....	42	40,824	1,175	951	638	2,913	256	21	1,648	.....	2,701	.....
Totals	67,254	2,313	5,103	4,927	46 040	.....	9,000	4,725	139,362	3,965	8,706	3,118	11,248	2,040	539	1,946	2,267	14,176	.....
KENT :																			
Blenheim	9 5 7	682	.....	.....	11,500	.....	.....	2,219	23.918	378	1,073	381	693	307	14	335	1,334	2,802	.....
Bothwell	2,1 1	553	.....	.....	1 550	.....	.....	638	4,852	404	365	193	271	543	80	.....	369	1,052	.....
Dresden	11,445	1,013	.....	.....	5,144	.....	.....	144	17,743	201	1.014	290	1,191	.....	314	951	1,287	3,057	.....
Ridgetown	12,404	1,451	.....	1,213	31,994	.....	14,281	658	62,001	674	2,088	412	†10,448	474	194	103	1,077	3,935	1,180
Totals	35,477	3,699	.....	1,213	50,185	.....	14,281	3,659	108,514	1,657	4,540	1,276	12,533	1,324	602	1,389	4,007	10,846	1,180
ELGIN :																			
Aylmer	15,694	877	188	.....	13,243	.....	1,200	1	31,203	1,122	3,139	348	2,052	220	75	.....	842	3,910	.....
NORFOLK :																			
Simcoe	18,933	1,184	3	2,584	13,827	2,500	9,280	3,186	51,497	745	3,546	1,163	§10,531	.....	258	509	1,419	11,354	457
WELLAND :																			
Niagara Falls	34,285	1,653	8,689	26	81,500	2,200	.....	3,292	131,645	2,975	7,792	1,536	4,991	3,238	520	903	.....	13,030	.....
Thorold	16,4 9	1,0 8	125	.....	2,500	.....	.....	1,370	21,452	693	1,920	738	840	.....	51	174	1,014	4,410	.....
Welland	14,099	791	2,160	967	5,500	.....	515	2,183	26,215	939	2,276	961	1,563	1,063	68	.....	890	4,175	2,407
Totals	64,823	3,462	10,974	993	89,500	2,200	515	6,845	179,312	4,607	11,988	3,235	7,394	4,301	639	1,077	2,104	21,615	2,407
LAMBTON :																			
Forest	7,559	565	.....	.....	5 405	.....	.....	694	14.223	468	860	1.019	863	.....	99	334	520	3,100	.....
Petrolea	33,200	2 005	.....	.....	43,706	.....	4.236	953	84.100	2,368	3,380	1 916	5,208	2,166	323	1,095	1,591	10,081	.....
Sarnia	54,737	3,905	10,604	666	111,941	.....	5,470	1,303	188 626	4,126	11,454	1,748	7,183	10,394	862	2,007	2,883	12,486	13,192
Totals	95,496	6,475	10,604	666	161,052	.....	9,706	2,950	286,949	6,962	15,694	4,683	13,254	12,560	1,284	3,436	4,994	25 667	13,192

* Including $4,540 repayment of mortgage on factory for loan. † Including $9,033 for silica walks. § Including $9,149 for granolithic walks.

TABLE IX. FINANCIAL STATEMENT—TOWN MUNICIPALITIES—*Continued.*

Towns.	Disbursements.—*Continued.*					Assets.						Liabilities.							
	Debentures redeemed.	Refund of moneys borrowed for current expenses.	Interest on Loans, advances and debentures.	Miscellaneous	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
ESSEX:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Amherstburg	1,262	26,066	3,280	740	42,265	5,088	6,029	.....	64,900	130	76,097	488	2,427	4,846	...	54,056	7 000	1,247	70,064
Essex	4,694	1,581	8,689	477	18,308	1,176	8,320	.....	57,023	5,218	71,737	401	2 000	..	7,182	47,826	8 000	885	66 297
Leamington	1,303	5,063	2,071	289	15 547	653	7,514	.....	31,400	320	39,887	238	2 000	8,769	11,305	16 841	2,442	785	42,380
Sandwich	301	2,000	962	113	15,461		3,944	.....	25,150	6,035	35,129	372	1,541	...	1,791	19,145	2,245	687	25,781
Walkerville	5,579	12,119	3,745	1,398	32,944	7,850	999	.....	15,420	50,434	74,733	.....	.....	...	4,933	59,364	.....	1 359	65,856
Totals	13,138	46,688	13,747	3,037	124,615	14,747	26,806	.....	193,893	62,132	297,578	1,502	7,968	13,615	25,211	197,452	19,687	4,963	270 378
KENT:																			
Ecnhelm	1,229	13,500	1,107	427	23,510	408	2,172	.....	17,820	456	20,856	1,089	67	10,362	..	5,405	....	721	17 63
Bothwell	300	1,000	157	65	4,739	113	2 580	.....	19,893	*6 100	28,686	290	.....		1,300		1 633	..	3,32
Dresden	2,810	5,754	1,498	76	17 743	...	5,710	.....	25,700	18,000	49,410	1,232	.....	11,161	..	10 629	6,141	..	29,236
Ridgetown	1,746	36,022	3,204	113	61 670	331	6,599	.....	39,090	....	46,020	1,012	.....	12,114	3,209	14,521	12,579		69,435
Totals	5,585	56,076	5,966	681	107,662	852	17,061	...	102,503	24,556	144,972	3,623	60	43,640	4,509	56,625	20,353	721	119,531
ELGIN:																			
Aylmer	3,569	13,884	1,988	254	31,203	...	2,210	3,000	62,350	478	68,038	1,047	.....	.....		11,903	29,892	644	.. 43.486
NORFOLK:																			
Simcoe	2,508	13,100	4,662	700	51,352	145	5,614	2,524	49,770	4,000	62,033	...	...	15,000		21,549	10,127	327	2,269 74 269
WELLAND:																			
Niagara Falls	4,786	79,870	7,077	2,722	129,370	2,275	11,409	.....	216,585	914	231,183	.....	3,452	.....		33,715	82,338	17,700	3,053 140,258
Thorold	1,755	6,200	3,109	884	21,068	384	5,281	.....	51,700		57,365	992	3,186	.....	.....	.....	18 919	1,543	.. 24 640
Welland	842	5,500	4,275	239	25,198	1,017	3,496	25,628	76,250	†10,107	116,498	871	2,600	..	.....	.....	76,528	1,000	1,950 82.949
Totals	7,383	90,800	14,461	3,845	175,636	3,676	20,186	25,628	344,535	(10.1	405,046	1,863	9,232	.....		33,715	177,785	20,231	5,003 247,829
LAMBTON:																			
Forest	1,585	4,240	913	266	14,167	56	1,105	.....	31,600	..	32,761	..	..	....		7,825	6,221	1,155	 15,201
Petrolea	4,764	38,138	3,018	457	74,305	9,795	35,840	.....	70,008	14,126	129,761	1,564	11,600	....		9,150	73,244	19,060	5,246 119,904
Sarnia	12,462	95,500	13,429	658	188,484	142	32,640	§44,123	215,024	29,391	321,320	..	..	11,600		45,299	200,614	§16 753	6,104 280,370
Totals	18,561	137,988	17,360	1,321	276,956	9,993	69,585	44,123	316,624	43,517	483,842	1,564	11,600	11,600		62,274	280,079	36,968	11,356 415,475

* Composed of advances made on sidewalks and drains. ‡ Due sinking fund. † Including $6,000 for iron bridge. § Including $412 due sinking fund.
‖ Including town hall, fire engine and cemetery debentures.

TABLE IX. FINANCIAL STATEMENT—TOWN MUNICIPALITIES.—*Continued.*

Towns.	Receipts.									Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water rates, electric light rates, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Streets, bridges and parks.	Buildings and other works.	Support of the poor and other charities.	Administration of justice, including police services.	County treasurer for levy.	Payments on account of schools and education.	Sinking fund and other investments.
HURON:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Clinton	12,508	1,092	.....	38	4,600	.....	.....	3,169	20 807	1,415	1,263	617	1,497	.....	484	....	975	4,750	592
Goderich	23,503	677	4,432	1,260	53,000	.....	.....	1 889	84,761	2 342	6,249	348	2.298	660	951	506	.....	7,232	2,356
Seaforth	16,0:6	1,327	1,105	7,686	27,136	.....	.....	*5,402	58 692	1,946	2,220	286	2,221	4,886	186	.....	880	5,400	4,510
Wingham	12,814	1,013	.....	850	15,900	.....	.....	1,020	31,627	1,265	940	440	1,220	705	315	.....	640	3,380	850
Totals	64,861	4,139	5,537	9,834	100,036	.....	.....	11,480	195,887	6,968	10,612	1,691	7,236	6,251	1,936	506	2,495	20 762	8,338
BRUCE:																			
Kincardine	15,156	1,212	452	997	3,570	.....	50,000	3,824	75,141	1,202	3,238	1,194	2,040	48,038	420	.....	851	4,898	2.595
Walkerton	13,488	1,412	1,080	2,332	18 089	.....	†32,763	3,923	73,087	1,574	2,611	2,979	4.124	1,469	250	139	914	5,937	‡31,889
Wiarton	9,756	574	1,460	100	8,500	.....	7,149	393	27,932	542	2,939	927	1,131	1,559	38	389	1,192	2,839	.....
Totals	38,400	3,198	2,992	3,429	30,089	.....	89,912	8,140	176,160	3,318	8,788	5,100	7,295	51,066	708	528	2 957	13,674	34,484
GREY:																			
Durham	6,336	599	....	.....	1,000	.....	4,500	517	12,952	628	340	320	717	4,000	141	25	600	1,571	110
Meaford	10,907	899	....	.....	14,635	1,400	1,000	1,083	29,924	1,048	1,311	516	3,074	106	251	46	699	4,983	.....
Owen Sound	58,264	3,286	5,189	1,823	16,474	.....	§89,435	16,889	191,360	3,364	5,863	3,058	9,141	5,482	753	3,175	2,460	15,903	12,421
Thornbury	4,304	152	.....	12	5,000	.....	3,000	767	13,235	396	199	1,854	662	.....	22	.....	240	2,010	87
Totals	79,811	4 936	5,189	1,835	37,109	1,400	97,935	19,256	247,471	5,436	7,713	5,748	13,594	9,588	1,167	3,246	3,999	24,467	12,618
SIMCOE:																			
Alliston	5.886	425	202	2,185	8,926	....	.....	1,430	19,054	330	1,448	331	412	.....	42		400	2,075	4.674
Barrie	27,671	2,950	.....	‖4,6:5	5 219	....	5,400	79	46,034	1,375	5,772	1,471	4,914	27	609	892	1.958	11,468	1,187
Collingwood	33,116	3,386	6,637	140	20,500	....	7,000	4,094	74,873	2,571	7.571	3,245	2,958	732	786	491	6,418	10,804	410
Midland	6,601	869	....	.....	17,900	...	.....	339	25,709	533	909	411	756	.....	364	100	304	2,913	.....
Orillia	22.966	1,829	6,100	663	11,000	...	46,600	3,939	93,097	2,425	8,080	823	4,997	33,010	219	170	885	10,409	.....
Penetang	12,210	903	1,872	240	1,250	....	7,500	2,006	25,981	817	824	394	1,622	660	161	440	1,025	3,813	4,239
Stayner	4,643	230	...	.....	1,500	....	.....	2,199	8,572	745	342	203	706	46	63	6	3.5	2,000	.....
Totals	113.093	10,593	14,811	7,913	66.325		66,500	14.086	293.320	8,796	24.946	6,878	16 365	34,475	2,244	2.099	11.315	42,942	9 910

* Including $2,200 from sale of property. † Including $31,794 issued in 1890 and held in bank to meet maturing debentures. ‡ Including $31,172 consolidated debentures in bank to meet maturing debentures. ‖ Including $4,037 taken from sinking fund as per Act *re* consolidation of Town of Barrie, 57 Vict. O.S.
§ Including $75,000 railway bonus. See miscellaneous disbursements.

TABLE VIII. FINANCIAL STATEMENT—TOWN MUNICIPALITIES.—*Continued.*

Towns.	Disbursements—*Continued.*					Assets.						Liabilities.							
	Debentures redeemed.	Refund of moneys borrowed for current expenses.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
HURON:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Clinton		4,000	1,660	388	17,590	3,217	1,579	2,026	39,400	....	46,232	.....	.....	.....	7,000	‡22,500	.....	....	29,500
Goderich	615	54,000	6,600	324	84,541	220	4,525	16,703	136,085	.....	157,533	2,532	15	.....	5,000	*111,012	10,500	.....	129,059
Seaforth	6,000	24,496	3,864	802	57,727	1,365	629	20,750	48,000	.....	70,744	.....	.....	.....	11,500	42,000	4,600	....	58,100
Wingham		12,750	4,157	336	24,928	4,699	1,645	19,072	39,700	.....	65,116	621	270	13,000	48,500	43,000	3,200	3,369	71,960
Totals	6,615	94,796	16,320	1,850	186,186	9,501	8,378	58,561	263,185	.....	339,625	3,153	285	13,000	32,000	218,512	18,300	3,369	288,619
BRUCE:																			
Kincardine	....	3,500	1,926	608	70,510	4,631	4,632	17,448	93,800	15,000	135,511	.....	5,100	3,000	.....	80,509	.....	5,107	93,707
Walkerton	p1,259	13,800	5,437	705	73,887	....	7,592	34,246	68,000	280	110,118	...	600	.....	12,600	x84,021	7,289	595	105,105
Wiarton	500	11,588	2,446	1,594	27,734	198	2,292	8,100	39,355	323	50,268	359	.....	.....	7,000	35,649	2,000	6,552	51,560
Totals	1,759	28,938	9,809	2,907	171,831	4,829	14,516	59,794	201,155	15,603	295,897	359	5,700	3,000	19,600	200,170	9,289	12,254	250,372
GREY:																			
Durham	1,346	1,000	1,665	403	12,806	146	3,975	506	10,000	....	14,627	300	2,115	18,000	1,076	10,400	.....	500	32,390
Meaford	1,061	14,672	1,261	568	29,859	85	982	..	48,400	1,209	50,676	699	..	..	12,984	4,656	1,700	64	20,102
Owen Sound	12,553	15,013	21,241	75,278	186,085	5,275	50,420	xx39,479	247,675	.....	342,829	.....	13,423	90,000	35,109	319,781	7,085	766	466,364
Thornbury	100	5,350	879	202	11,601	1,734	461	483	5,000	.....	7,678	...	921	.....	.....	6,600	500	553	8,574
Totals	15,114	36,635	24,486	76,391	240,231	7,240	55,838	40,448	311,075	1,209	415,810	999	16,459	108,000	49,158	341,437	9,285	1,882	527,220
SIMCOE:																			
Alliston	80	5,570	1,373	340	16,416	2,658	3,382	3,028	34,071	136	43,255	655	319	..	4,270	38,397	8,089	1,550	53,280
Barrie	2,160	8,377	4,504	1,270	46,034	....	6,102	1,798	74,600	3,328	85,758	.....	.....	.....	21,600	50,015	5,249	..	76,864
Collingwood	6,500	20,000	10,446	981	74,048	865	403	1,573	197,961	330	201,152	.....	.....	.....	8,512	178,633	.....	814	187,959
Midland	1,285	16,000	1,444	161	25,280	429	9,408	.....	14,325	...	24,162	293	.....	.....	5,168	11,264	6,800	...	28,525
Orillia	4,740	16,000	5,777	750	88,794	4,806	16,303	.....	182,100	3,209	206,415	1,001	10,958	.....	14,460	112,154	.....	552	139,125
Penetang	1,435	3,211	3,725	663	28,029	2,751	3,007	4,239	48,000	197	58,145	..	417	825	.....	58,914	639	6,544	67,329
Stayner	150	2,400	100	158	7,253	1,359	371	.....	9,300	.....	11,210	314	1,163	.....	.....	1,050	...	891	3,421
Totals	16,500	72,073	27,478	4,303	286,294	13,026	39,226	10,568	560,357	7,220	630,397	2,263	12,857	825	54,095	450,417	20,777	10,354	551,498

* Including $115 not reported in 1895. + These debentures are now consolidated to mature in 1918 ‡ Including $16,500 consolidated debentures issued in 1891-2 to retire railway debentures. *p* Including $622 consolidated debentures No. 5 redeemed. ‖ Due on electric light contracts.
x Including $31,172 consolidated debentures. *xx* Including $7,085 in general account.

TABLE IX. FINANCIAL STATEMENT—TOWN MUNICIPALITIES.—*Continued.*

Towns.	Receipts.									Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water rates, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Lighting of streets, water supply, and fire protection.	Other expenses of municipal government.	Streets, bridges and parks	Buildings and other works.	Support of the poor and other charities.	Administration of justice, including police services.	County treasurer for levy.	Payments on account of schools and education	Sinking fund and other investments.
MIDDLESEX:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Parkhill	9,943	542	.....	35	7,039	.....	.....	15	17,574	229	575	721	1,232	89	22	200	554	3,702	471
Strathroy	14,809	1,558	....	.....	20,213	...	870	2,061	39,511	1,154	2,106	982	3,925	.....	106	722	1,665	8,300	....
Totals	24,752	2,100	.....	35	27,252	....	870	2,076	57,085	1,383	2,681	1,703	5,157	89	128	922	2,219	12,002	471
OXFORD:																			
Ingersoll	32,612	1,870	.....	11,504	4,256	.....	.....	.....	50,242	1,198	7,816	1,377	1,960	.....	305	658	3,294	9,227	.....
Tilsonburg	17,614	1,193	.....	5,687	*xx* 69,361	1,500	10,000	3,266	108,621	1,181	912	574	5,373	5,130	74	470	1,006	5,854	925
Woodstock	61,581	5,749	7,309	10,302	59,553	2,300	23,360	15,411	185,565	2,600	12,959	2,250	9,669	.....	551	2,619	4,241	17,473	45,453
Totals	111,807	8,812	7,309	27,493	133,170	3,800	33,360	18,677	344,428	4,979	21,687	4,201	17,002	5,130	930	3,747	8,541	32,554	46,378
BRANT:																			
Paris	19,308	1,205	5,170	263	3,000	.....	.....	818	29,764	1,008	6,040	1,032	2,834	436	616	684	1,132	5,850	750
PERTH:																			
Li-towel	16,046	1,098	.....	43	15,731	.....	.....	732	33,650	833	1,475	1,048	2 158	59	28	.....	1,136	4,383	.....
Mitchell	12,272	1,076	1,575	.....	13,350	.....	.....	2,424	30,697	1,069	3,540	431	1,866	558	171	247	852	3,729	.....
St. Marys	21,961	1,112	....	.....	25,625	.....	.....	1,123	49,821	809	3,051	837	3,750	.....	337	1,239	.....	6,400	.....
Totals	50,279	3,286	1,575	43	54,706	.....	.....	4,279	114,168	2,711	8,066	2,316	7,774	617	546	1,486	1,988	14,512	.....
WELLINGTON:																			
Harriston	7,794	923	.....	.....	8,750	.....	3,000	2,851	23,318	492	1,093	351	1,136	.....	15	37	784	3,385	.....
Mt. Forest	13,913	1,733	.....	1,171	26 300	.....	1,600	764	45,481	532	1,230	932	1,599	876	124	440	1,012	4,468	1,276
Palmerston	8,640	815	.....	2,117	9,000	.....	.....	3,956	24,528	420	1,870	848	1,252	563	.....	325	758	7,749	.....
Totals	30,347	3,471	.....	3,288	44,050	.....	4,600	7,571	93,327	1,444	4,193	2,131	3,981	1,439	139	802	2,584	15,602	1,276
WATERLOO:																			
Berlin	40,126	2,992	.....	1,391	28,630	.....	22,000	2,442	97,581	2,005	7,594	2,159	15,641	12,995	1,153	649	2,335	17,740	.....
Galt	47,670	4,473	5,984	13,066	468	11,000	15,000	3,005	1 0 666	3,337	6,150	1,236	7,396	8,580	1,070	733	2 916	24 919	8,463
Waterloo	16,983	1,250	.....	477	3,708	.....	16,000	1,772	40,190	1,009	1,779	666	2,985	10,454	35	386	1,388	4,536	104
Totals	104,779	8,715	5,984	14,934	32,806	11,000	53,000	7,219	238,437	6,351	15,523	4,061	26,022	32,029	2 258	1,768	6,639	47,195	8,567

xx Including temporary loan for local improvements and renewals.

TABLE IX. FINANCIAL STATEMENT—TOWN MUNICIPALITIES.—*Continued.*

Towns.	Disbursements.—*Continued.*					Assets.						Liabilities.							
	Debentures redeemed.	Refund of moneys borrowed for current expenses.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgage, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
MIDDLESEX:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Parkhill	400	8,139	1,080	160	17,574	....	2,034	1,796	25,200	42	29,072	527	....	....	8,000	8,600	39	....	17,166
Strathroy	3,015	13,300	2,816	1,420	39,511	....	10,29	9,600	37,500	330	57,721	1,467	....	....	1,204	40,191	13,213	....	56,015
Totals	3,415	21,439	3,896	1,580	57,085	....	12,325	11,396	62,700	372	86,793	1,934	....	....	9,204	48,791	13,252	....	73,181
OXFORD:																			
Ingersoll	10,000	2,884	10,392	1,131	50,242	....	7,251	*69,342	67,350	33,377	177,320	....	....	60,000	....	99,189	†4,981	5,725	169,895
Tavistock	10,000	68,518	4,068	64	105,284	3,337	1,288	4,502	69,650	15,543	94,320	....	3,579	8,000	15,500	42,198	11,15	....	75,936
Woodstock	5,82-	56,000	22,293	1,265	183,203	2,364	11,177	146,698	253,383	8,506	422,188	....	5,115	20,000	§0,325	368,391	8,553	2,100	459,684
Totals	26,428	127,402	37,288	2,460	338,727	5,701	19, 16	220,542	390,383	57,486	693,828	....	8,694	83,000	76,025	509,778	20 193	7,825	705 515
BRANT:																			
Paris	1,373	3,000	2,957	645	28,357	1,407	618	6,250	111,000	....	119,275	....	....	....	....	49,633	....	....	49,033
PERTH:																			
Listowel	..	14 000	5 984	‡2,536	33 670	....	1,548	*p*	39,900	420	41,878	....	....	15,000	18,000	56,000	1,731	....	90 731
Mitchell	754	13,350	2 429	40	29 9 6	1,661	76	....	49,000	785	51,522	852	....	....	....	*pp* 37,800	....	2,190	40 842
St. Marys	2,240	27,80-	2,716	1,06.	49,755	66	2,589	....	57,900	....	60 555	....	....	....	....	59,661	920	5	60 586
Totals	3,008	54,65-	11,129	3,638	112,441	1,727	4,213	....	146,800	1,215	153,955	852	....	15,000	18,000	153,467	2,651	2,195	192,165
WELLINGTON:																			
Harriston	3,000	8,250	1,836	483	20,856	2,462	4 313	....	26,100	....	32,877	758	....	20 000	3,000	5,4 0	4,000	841	34,002
Mt. Forest	..	26 88	3 541	80	43,629	1,85-	....	7,826	35,500	....	45,22	....	....	15 000	7,7 0	40,60	2,70	....	66,050
Palmerston	211	5,000	4,196	1,197	24,38-	139	3,199	....	19,230	....	22,568	....	....	30,000	10 020	20,291	4,000	....	64,291
Totals	3,211	40,05-	9,573	2,480	88,871	4,456	7,512	7,866	80,830	....	100,664	758	....	65,000	20,750	66,291	10,70	844	164,343
WATERLOO:																			
Berlin	4 804	23,102	4,988	2,38-	97,547	34	2,893	6,056	74,841	43,669	127,49	....	....	7,854	....	72,167	28,630	....	108,651
Galt	10,8-0	10 3-6	11,416	2,840	10 ,24	424	2,264	53,67-	280 877	770	3 8 04	....	....	....	16,860	215,450	408	6,191	2 8,972
Waterloo	2,42-	3,650	2,189	1,245	32,904	7,286	623	297	46,0 0	....	54,206	....	4,464	2,563	3,557	31,364	297	56	42,810
Totals	18 152	37,06-	18,593	6,467	230,693	7,744	5,780	60,032	401,718	44,439	519,713	....	4 464	10 4 7	20 417	318 981	29 39-	6 759	390,433

* Including $17,917 in industrial mortgage, the rebate on same in 1894 being $1,942 for number of hands employed; and also $725 in general account. † Including $725 due sinking fund. ‡ Including $1,000 grant to Gillies & Co. § Due sinking fund. *p* $2,500 reported as an asset in 1893 is omitted, as it was for a bonus to Morris, Field & Co. not repayable. *pp* Including $20,656 waterworks and other debts consolidated 1893-4. § Omitting $1,675 overstated in 1893.

TABLE IX. FINANCIAL STATEMENT—TOWN MUNICIPALITIES.—*Continued.*

Towns.	Receipts.									Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water rates, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Lighting of streets, water supply, and fire protection.	Other expenses of municipal government.	Streets, bridges and parks.	Buildings and other works.	Support of the poor and other charities.	Administration of justice, including police services.	County treasurer for levy.	Payments on account of schools and education.	Sinking fund and other investments.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
DUFFERIN :																			
Orangeville.	15,664	1,534	....	2,078	34,158	....	....	112	53,546	740	2,244	533	1,776	52	207	340	.....	5,450	2,776
LINCOLN :																			
Niagara	9,412	917	2,293	649	1,200	....	....	257	14,728	570	2,734	706	1,268	1,023	.....	449	1,544	....	625
WENTWORTH :																			
Dundas	15,925	963	946	329	....	. ....	....	3,632	21,795	1,614	1,690	634	1,755	927	510	480	886	4,969	1,053
HALTON :																			
Milton	8,430	407	949	110	.....	.....	2,000	80	11,976	506	544	917	1,336	2,080	36	49	360	1,129	.....
Oakville....	9 721	946	.....	2,731	5,000	.....	7,500	4,377	30,275	815	1,283	685	†12,639	.....	73	12	.....	3,620	3,597
Totals....	18,151	1,353	949	2,841	5,000	.....	9,500	4,457	42,251	1,321	1,827	1,602	13,975	2,080	109	61	360	4,749	3,597
PEEL :																			
Brampton ..	19,570	737	3,290	*7,122	.....	.....	3,724	7,041	41,484	1,688	2,461	1,566	2,703	201	602	477	885	6,500	.....
YORK :																			
Aurora .. .	8,612	422	578	.....	3,300	.....	.....	2.365	15,257	476	751	190	954	19	15	347	607	3,500	400
Newmarket.	12,256	861	1,592	606	3,200	.....	.....	2,980	21,495	543	1,666	290	2,883	.....	48	20	570	4,020	.....
Nth.Toronto	15,365	180	725	15	17,500	.....	5,764	68	39,617	2,003	3,394	806	2,445	.....	101	....	1,332	4,436	3,133
Toronto Junction .	89,412	1,659	5,343	633	100,221	.....	15,662	5,406	218,336	3,639	13,305	3,885	‡12,964	865	354	3,281	.....	10,437	11,641
Totals....	125,675	3,122	8,188	1,254	124,221	... .	21,426	10,819	294,705	6,661	19,116	5,171	19,246	884	518	3.648	2,509	22,393	15,174
ONTARIO :																			
Oshawa	22,417	1,247	.....	175	11,334	.....	.....	167	35,340	850	2,269	814	2,714	8'0	799	700	1,230	8,165	.... .
Uxbridge ..	15,583	948	.... .	.....	p2,669	.....	.....	620	19,820	788	711	286	1,754	514	244	35	620	6,209	1,477
Whitby	22,426	1,234	....	390	35,900	.....	.....	281	60,231	850	1,864	1,258	2,743	.....	299	175	1,713	6,709	1,734
Totals....	60,426	3,429	.....	565	49,903	.....	.....	1,068	115,391	2,488	4,844	2,358	7,211	1,344	1,342	910	3,563	21,143	3,211

* Including $1,025 rebate on Young Co.'s mortgage, and $6,000 proceeds sale of foundry. ‡ Including subway and local improvement expenditures.
p Including loans for drains $293, and loans from sinking fund $1,477. † Including $9,453 for bridge.

TABLE IX. FINANCIAL STATEMENT—TOWN MUNICIPALITIES.—*Continued.*

Towns.	Disbursements.—*Continued.*					Assets.						Liabilities.							
	Debentures redeemed.	Refund of moneys borrowed for current expenses.	Interest on loans, aid vanies and debentures	Miscellaneous.	Total disbursements	Cash in treasury	Taxes in arrears	Investments in stocks, mortgages, debentures, etc	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
DUFFERIN:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Orangeville	112	34,571	4,248	497	55,546		7,263	5,252	42,677	207	55,397	1,181	3,500	15,000	3,388	51,800	7,858	343	83,070
LINCOLN:																			
Niagara ..	1,467	..	2,494	31,229	14,309	619	1,796	537	74,517	2,612	80,111	2,731	316	..	...	45,811	6,100	134	55,092
WENTWORTH:																			
Dundas	1,133	..	3,127	1,648	20,491	1,304	11,816	12,744	78,314	...	104,208	...	..	..	6,500	54,569	..	212	61,281
HALTON:																			
Milton ..	665	421	2,500	10	10,596	1,620	3,108	3,467	41,679	..	49,815	..	..	....	2,230	42,794	..	..	45,084
Oakville		4,000	1,080	770	28,494	1,781	3,562	6,892	26,675	69	38,870	434	1,279	....	.....	25,500	2,500	3,663	33,576
Totals ..	665	4,421	3,580	780	38,850	3,401	6,661	10,359	68,195	69	88,685	434	1,279	..	2,290	68,294	2,500	3,663	78,400
PEEL:																			
Brampton ..	5,571	..	8,003	1,658	32,445	2,079	788	9,825	138,675	789	179,156	..	5,000	..	2,762	145,600	..	460	153,762
YORK:																			
Aurora	900	4,000	1,707	40	14,679	578	1,697	400	50,000	25	52,695	..	1,500	..	15,619	13,222	2,410	120	32,871
Newmarket	1,697	8,300	2,705	525	18,061	3,451	345	..	74,016	3,002	80,794	736	..	..	19,710	33,958	..	..	54,404
Nth. Toronto	480	13,144	4,500	1,655	30,132	489	18,109	3,133	90,160	13,463	125,640	1,517	..	..	16,400	60,560	11,000	8,996	98,473
Toronto Junction	8,094	126,598	15,960	11,345	217,374	962	89,961	13,833	446,829	132,183	683,768	..	17,788	..	103,771	x675,419	149,508	40,955	987,441
Totals	6,159	140,647	24,471	13,805	280,240	5,479	110,107	17,366	641,305	148,663	922,900	2,253	19,288	....	155,500	783,179	162,918	50,071	1,173,269
ONTARIO:																			
Oshawa	3,704	10,000	3,144	151	36,340		8,015	8,000	39,700	525	56,040	..	....	....	3,300	45,482	7,234	..	56,116
Uxbridge ..	..	6,200	2,741	167	10,716	44	6,714	*3,977	38,000	..	48,735	...	1,000	2,000	15,000	21,900	4,969	539	52,408
Whitby	378	20,000	5,770	..	50,850	872	18,030	19,929	53,600	1,906	93,857	...	221	20,000	1,000	72,938	§14,534	675	109,368
Totals ..	4,082	36,200	11,655	318	114,955	916	32,779	31,906	126,100	2,431	193,632	...	1,221	22,000	19,300	140,320	26,837	1,214	217,892

‡ Including $31,800 consolidated debentures, including redemption railway aid debentures $14,500, bonus debentures $6,000, general $11,300. § Including $726 paid Niagara Assembly, and Master's account, by order of Court. §§ Including $1,554 due sinking fund. * Including $2,500, bequest of late Jos. Gould for charity, and $1,417, sinking funds in general account. x Including waterworks $163,146, electric light $21,850, and sewerage $156,780. Brampton's 'investment' assets are reduced by omitting $58,889, the value in 1895 of Haggart Bros.' estate, now in liquidation.

TABLE IX. FINANCIAL STATEMENT—TOWN MUNICIPALITIES.—*Continued.*

Towns.	Receipts.									Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water rates, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Streets, bridges and parks.	Buildings and other works.	Support of the poor and other charities.	Administration of justice, including police services.	County treasurer for levy.	Payments on account of schools and education.	Sinking fund and other investments.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
DURHAM:																			
Bowmanville	22,927	1,562	...	17	15,000	.....	.....	1,056	40,562	1,157	2,445	1,267	2,449	.....	661	1,386	901	5,450	.....
Port Hope..	26,684	6,725	.....	738	57,692	.....	*69,200	3,762	164,801	3,335	4,203	1,820	7,364	6,036	377	1,465	1,281	7,952	692
Totals....	49,611	8,287	.....	755	72,692	.....	69,200	4,818	205,363	4,492	6,648	3,087	9,813	6,036	1,038	2,851	2,182	13,402	692
NORTHUMBERLAND:																			
Cobourg....	31,280	6,898	.....	2,771	8,723	.....	7,500	2,374	59,546	2,117	5,415	1,815	3,090	113	508	1,869	.....	8,449	.....
PR. EDWARD:																			
Picton	18,180	1,971	3,143	40	.....	.....	.....	1,453	24,787	1,351	4,890	1,282	2,190	342	290	970	1,508	4,508	.....
LENNOX AND ADDINGTON:																			
Napanee ...	26,199	2,533	25	62	2,000	.....	.....	2,491	33,310	1,333	3,167	1,142	6,151	.....	663	604	2	8,270	.....
LEEDS:																			
Brockville..	61,062	8,952	20,180	4,614	67,985	.. ..	.....	558	163,651	3,300	24,019	7,102	7,445	†17,027	1,389	4,875	.....	19,814	11,849
Gananoque.	17,925	2,028	.....	625	11,500	.....	.....	1,146	33,224	773	2,204	640	3,366	.....	524	1,403	1,139	5,850	1,925
Totals ...	78,987	10,980	20,480	5,239	79,485	.....	.....	1,704	196,875	4,133	26,253	7,742	10,811	17,027	1,913	6,228	1,139	25,664	13,794
GRENVILLE:																			
Prescott ...	15,692	2,903	....	.....	1,993	4,000	5,000	2,376	31,964	1,000	1,557	1,540	3,440	5,000	326	805	.....	10,012	.....
STORMONT:																			
Cornwall ...	47,003	5,010	.....	5,544	21,351	.....	4,784	386	84,078	1,841	3,799	2,144	9,501	8,716	203	2,518	2,305	12,930	6,140
RENFREW:																			
Arnprior ...	16,242	1,871	..	57	.....	....	.....	4,937	23,107	748	1,501	776	1,985	.... ..	84	890	1,384	5,586	477
Pembroke ..	22,623	2,660	1,256	2,002	.....	....	... ..	2,348	4,888	1,420	2,397	1,582	3,643	15,138	74	541	2,178	8,315	.....
Renfrew ...	13,735	1,020	83	.....	3,000	.....	.....	2,343	20,181	576	1,375	309	8,736	504	75	459	1,200	3,261	.....
Totals....	52,599	5,551	1,339	2,059	3,000	.....	.....	27,628	92,176	2,744	5,274	2,667	13,781	15,642	233	1,890	4,762	17,162	477

* Consolidated debt. † Debentures issued in 1895.

TABLE IX. FINANCIAL STATEMENT—TOWN MUNICIPALITIES.—*Continued.*

Towns.	Disbursements.—*Continued.*					Assets.						Liabilities.							
	Debentures redeemed.	Balance of moneys borrowed for current expenses.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
DURHAM:																			
Bowmanville	770	17,300	3,384	820	37,840	2,762	5,802	.....	65,000	200	73,764	.....	2,400	.....	.....	*65,255	2,000	.....	69,655
Port Hope	47,885	42,900	9,673	2,078	103,461	1,640	7,361	14,442	235,989	..	260,032	.....	.....	.....	.....	197,050	‡3,692	1,822	202,564
Totals ..	48,655	86,200	12,057	2,898	200,981	4,402	13,763	14,442	300,989	200	333,796	.....	2,400	.....	.....	262,305	5,692	1,822	272,219
NORTHUMBERLAND:																			
Cobourg ...	11,000	7,557	14,207	x3,408	59,546	.....	11,083	4,987	175,000	2,034	193,104	.....	.....	.....	.....	215,591	1,798	844	218,233
PR. EDWARD:																			
Picton ...	2,754	.....	2,811	* 193	23,056	1,701	2,769	.....	81,867	1,023	87,360	.....	5,200	7,155	1,286	41,921	.....	27	55,589
LENNOX AND ADDINGTON:																			
Napanee ..	2,555	2,000	4,530	426	30,913	2,397	14,444	.....	63,073	719	80,633	2,800	4,840	30,000	18,650	29,526	.....	1,900	87,716
LEEDS:																			
Brockville ..	...	41,270	21,483	$4,450	168,648	$	72,782	69,259	284,878	89,504	507,431	.....	2,188	52,000	33,000	269,000	58,582	4,535	519,305
Gananoque..	...	10,700	2,913	235	31,622	1,552	1,095	8,121	91,000	.....	101,748	.....	.....	19,000	10,500	21,000	3,000	1,267	54,767
Totals ...	...	51,970	23,396	4,685	197,335	1,540	73,877	68,380	375,878	89,504	609,179	.....	2,188	71,000	43,500	390,000	61,582	5,802	574,072
GRENVILLE:																			
Prescott...	3,131	1,500	1,085	2,548	31,964	.....	9,241	.....	71,073	604	80,918	..	...	.....	...	13,849	7,400	493	3,637	25,379
STORMONT:																			
Cornwall...	4,105	15,668	5,571	772	76,240	7,878	13,675	†11,072	66,175	15,170	113,930	.....	5,856	....	25,000	79,150	14,351	....	124,357
RENFREW:																			
Admptor ..	653	.....	1,787	371	16,355	6,852	3,810	30,936	47,680	151	89,429	804	4,549	30,000	1,437	9,327	.....	1,272	47,389
Pembroke	4,310	.....	8,174	509	48,104	787	24,378	40,000	106,493	9	171,647	2,740	10,044	40,000	17,527	103,038	...	211	173,540
Renfrew ..	921	292	1,438	401	12,045	636	6,658	.....	8,135	.....	15,399	....	1,915	25,304	.....	2,260	3,000	....	32,479
Totals...	5,894	292	11,399	1,081	83,901	8,275	34,796	70,936	162,308	160	276,475	3,544	16,508	95,304	18,964	114,605	3,000	1,483	253,408

* Consolidated under Special Act, Chap. 78, C.S. 1873. † Including $700 paid county treasurer, and $1,240 paid on Connell judgment ‡ Including $692 due sinking funds. § Including $7,700 paid county treasurer, and $1,000 paid carriage works. x Including $1,067 for maintenance of harbor, and $1,125 paid county treasurer. † Including $840 in general account.

TABLE IX. FINANCIAL STATEMENT—TOWN MUNICIPALITIES.—*Continued.*

Towns.	Receipts.									Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water rates, etc.	Refunds of moneys invested, including interest, etc.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous	Total receipts	Allowances, salaries and commissions.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Streets, bridges and parks.	Drains and sewer works.	Support of the poor and other charities.	Administration of justice, including police services.	County treasurer's levy.	Payments on account of schools and education.	Sinking fund and other investments.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
LANARK:																			
Almonte ...	16,731	1,543	.....	.....	6,450	.....	1,700	1,722	28,146	787	1,999	1,649	1,742	250	471	385	1,421	6,763	.....
Carleton Pl.	16,419	2,293	.....	.....	5,400	.....	.....	1,724	25,836	721	1,781	904	2,589	.....	233	651	1,355	7,000	.....
Perth	19,235	2,273	.....	.....	5,000	.....	.....	4,289	30,797	794	2,266	833	3,106	.....	274	515	.....	7,433	.....
Smith's Falls	20,835	2,758	.....	37	4,500	8,500	2,000	2,050	40,670	838	1,962	1,442	3,182	2,250	105	518	1,681	14,970	.....
Totals....	73,220	8,827	.....	37	21,350	8,500	3,700	9,815	125,449	3,140	8,008	4,831	10,619	2,500	1,034	2,069	4,457	36,166	.....
VICTORIA:																			
Lindsay	47,941	4,817	.....	92,364	34,000	7,800	.....	2,605	189,527	2,119	5,639	3,227	6,038	1,352	1,387	2,048	3,170	16,479	2,727
PETERBORO':																			
Peterboro'..	76,381	10,615	.....	14,151	.....	5,000	15,000	2,330	123,477	3,082	16,244	3,350	11,370	3,579	2,542	6,086	.....	27,900	22,682
HASTINGS:																			
Deseronto..	15,389	1,123	.....	5,259	455	.....	.....	113	22,339	623	1,903	292	1,754	1,138	356	408	1,400	7,288	1,467
Trenton....	36,496	2,725	.....	481	92,012	.....	.....	816	132,53	1,013	2,262	3,606	1,082	.....	522	1,652	.....	9,413	481
Totals....	51,885	3,848	.....	5,740	92,467	.....	.....	929	154,859	1,636	4,165	3,898	2,836	1,138	878	2,060	1,400	16,701	1,948
MUSKOKA:																			
Bracebridge	6,689	756	.....	87	6,000	1,000	24,996	677	40,20	520	130	650	1,819	15,190	112	70	.....	2,917	537
Gravenhurst	7,283	410	.....	141	2,800	5,000	.....	1,277	16,911	388	628	589	1,175	.....	122	350	.....	3,700	5,141
Totals....	13,972	1,166	.....	228	8,800	6,000	24,996	1,954	57,116	908	758	1,239	2,994	15,190	234	420	.....	6,617	5,678
PARRY SOUND:																			
Parry Sound	13,645	437	965	267	3,800	6,500	6,000	461	32,075	468	1,533	543	1,214	5,253	50	365	....	9,917	.....
NIPISSING:																			
*Mattawa...	4,169	1,191	.....	.....	1,970	.....	.....	310	7,630	684	172	551	930	250	75	.....	.....	2,318	430
*North Bay .	5,977	1,000	2,115	.....	2,000	.....	.....	1,433	12,555	1,410	1,545	493	1,182	1,090	132	.....	.....	2,753	.....
Sudbury ...	5,411	2,013	.....	.....	14,221	.....	.....	421	24,056	775	451	799	876	.....	192	.....	.....	1,750	.....
Totals....	15,557	4,234	2,115	.....	18,151	.....	.....	2,194	42,251	2,869	2,168	1,843	2,988	1,340	399	.....	.....	6,851	430

* No returns were received from the treasurers of Mattawa and North Bay, and the above statistics have been taken from unsatisfactory reports of municipal auditors.

TABLE IX. FINANCIAL STATEMENT—TOWN MUNICIPALITIES.—*Continued.*

Towns.	Disbursements.—*Continued.*					Assets.						Liabilities.							
	Debentures redeemed.	Refund of moneys borrowed for current expenses.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
LANARK:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Almonte	2,200	6,440	2,415	415	26,944	1,302	166	.....	90,500	.....	91,868	..	.....	.....	.....	44,900	.....	.....	44,900
Carleton Pl.	2,[illegible]	5,400	1,[illegible]	1[illegible]	21,18[illegible]	1,[illegible]	.....	.....	39,200	.....	40,853	.....	.....	.....	2,600	18,000	1,200	.....	22,400
Perth	3,[illegible]	5,000	1,[illegible]	1,277	26,[illegible]	3,863	966	.....	63,000	.....	67,829	.....	2,003	10,400	2,400	19,600	.....	.....	35,403
Smith's Falls	8,791	3,800	4,693	611	38,841	1,826	247	.....	91,000	4,218	97,291	.....	.....	17,000	15,242	41,834	1,000	.....	75,076
Totals	11,491	20,857	9,691	2,303	116,90[illegible]	8,544	1,379	.....	283,700	4,218	297,841	.....	3,003	27,400	20,242	124,934	2,200	.....	177,779
VICTORIA:																			
Lindsay	87,[illegible]	40,000	15,543	1,671	188,[illegible]	985	15,610	20,901	129,771	1,368	168,665	3,162	..	.....	46,761	154,000	16,000	4,260	224,183
PETERBORO':																			
Peterboro'	5,000	5,503	15,097	1,893	122,428	1,049	14,773	189,462	242,000	2,580	349,864	..	.....	..	62,500	183,150	.....	3,978	249,628
HASTINGS:																			
Deseronto	3,911	400	1,103	257	22,339	..	1,047	6,046	29,708	.....	36,801	.....	.....	5,000	9,995	.....	425	.....	15,450
Trenton	..	101,[illegible]	7,883	2,789	141,999	621	35,681	34,361	124,500	12,596	197,749	.....	7,587	10,000	3,665	118,767	113,956	2,109	156,075
Totals	3,941	101,[illegible]	8,986	3,046	154,248	621	36,728	30,397	154,208	12,596	234,550	.....	7,587	15,000	13,660	118,767	14,411	2,109	171,525
MUSKOKA:																			
Bracebridge	711	6,000	984	151	29,796	10,40[illegible]	3,503	3,31[illegible]	34,500	.....	51,722	.....	.....	.....	7,819	32,325	.....	.....	40,145
Gravenhurst	6[illegible]	2,8[illegible]	867	61	16,[illegible]	3,[illegible]	3,674	5,141	20,8[illegible]	..	30,106	.....	2,200	.....	10,860	6,713	.....	148	18,921
Totals	1,405	8,810	1,851	217	46,311	13,86[illegible]	7,177	8,451	55,395	.....	81,8[illegible]	.. ..	2,200	.....	18,679	38,039	.. ..	148	59,066
PARRY SOUND:																			
Parry Sound	618	7,200	2,097	457	29,755	2,320	399	....	47,873	413	51,005	....	14	.....	6,402	32,867	.. ..	80	39,363
NIPISSING:																			
Mattawa	71	500	667	763	7,478	132	4,230	*139	7,200	106	12,177	.....	1,467	.....	.....	9,218	†2,960	2,630	16,275
North Bay	30	..	2,076	132	11,77[illegible]	777	6,893	.. ..	45,9[illegible]	....	53,6[illegible]	.. ..	4,11[illegible]	.....	5,481	33,[illegible]	2,000	.. ..	44,872
Sudbury	2[illegible]	13,707	311	87	21,446	63	4,291	.. ..	4,951	.....	8,945	....	2,09[illegible]	.....	911	2,287	2,662	190	8,052
Totals	1,413	15,207	3,154	1,012	40,702	1,549	15,417	439	57,181	106	74,672	....	7,672	....	6,392	44,783	7,622	2,730	69,199

‡ Including $24,958 sinking funds at which $21,251 existed in 1895, not reported by town treasurer, as these funds are managed by town trust commissioners. †$8,[illegible] guaranteed to Mossom Boyd for school board was included in liabilities for 1894—was repaid by school board from rates in 1894. * Including $4.0 sinking funds assumed to be in town securities, being estimated amount of three payments of $159 each at 3%. The returns from this municipality are meagre and unsatisfactory. † Including $4.0 due fire engine sinking fund.

TABLE IX. FINANCIAL STATEMENT TOWN MUNICIPALITIES.—*Continued.*

Towns.	Receipts.								Disbursements.										
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Subsidy of province in lieu of building grant.	Borrowed for current expenses.	Balance of debentures not issued.	Payments on debentures for local improvements.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Streets, bridges and parks.	Buildings and other works.	Support of the poor and other charities.	Administration of justice, including police services.	County treasurer's or levy.	Payments on account of schools and education.	Sinking fund and other investments.	Debentures redeemed.
MANITOULIN:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Gore Bay	2,937	205	22	50			299	3,963	160		102	678	815		50		829	157	
Little Current	2,038	184					384	2,606	414	97	76	259		12	14		864		120
Totals	4,975	389	22	500			683	6,569	574	97	178	917	815	12	64		1,693	157	120
ALGOMA:																			
Sault St Marie	27,152	639	7,336	17,695		25,573	6,771	85,166	1,316	2,767	924	717	x 8,519	286	526		3,046	6,713	81
Thessalon	2,492	307		300			1,212	4,311	239	188	121	1,238		12	16		734	640	
Totals	29,644	946	7,336	17,995		25,573	7,983	89,477	1,555	2,955	1,045	1,975	28,519	298	552		3,780	7,332	81
THUNDER BAY:																			
Ft William	14,065	2,429	*9,176	30,307	8,000	42,762	2,624	89,963	3,734	1,134	2,242	11,176	2,894	485	2,079		121,321	x8,775	
Port Arthur	38,991	10,709	1,154	a20,878		70,000	3,857	365,579	1,270	1,796	1,617	1,459	8,840	460	798		4,229	b9,103	
Totals	53,456	13,138	10,330	271,385	8,000	92,762	6,471	455,532	5,004	2,930	3,889	12,635	11,734	945	2,837		28,553	17,878	
RAINY RIVER:																			
Rat Portage	14,705	2,445	779	10,244	3,000		1,300	32,473	1,608	2,917	1,679	4,458	165	120	988		9,364	479	1,510

* Including $9,000 unexpended balance of school debentures, 1893. † Including $7,500 Neebing settlement debentures issued in 1893. a Including $73,975 loans for street railway, pending sale of debentures and $9,103 loans from sinking fund. ‡ Including $9,000 balance proceeds of debentures, 1893. x Including $6,507 in town account. b Annual payment and interest of sinking fund retained in town account. c Paid for land patent to Ontario Government.

TABLE IX. FINANCIAL STATEMENT—TOWN MUNICIPALITIES.—*Continued.*

Towns.	Disbursements.—*Continued.*				Assets.						Liabilities.							
	Refund of moneys borrowed for current expenses.	Interest on loans, and values and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
MANITOULIN:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Gore Bay	500	187	343	3,851	152	726	690	800	....	2,368	....	680	....	1,850	....	....	185	2,715
Little Current	.....	200	254	2,250	316	467	.....	6,950	....	7,733	....	....	....	735	2,479	....	678	3,892
Totals	500	387	587	6,101	468	1,193	690	7,750	.....	10,101	....	680	.....	2,585	2,479	.....	863	6,607
ALGOMA:																		
Sault St. Marie	15,270	18,105	5,261	83,670	1,496	21,429	227,511	31,075	108	281,619	....	1,968	20,000	12,300	338,124	2,425	2,660	377,477
Thessalon	425	86	207	8,874	437	1,246	929	2,754	....	5,365	....	100	.....	1,400	.....	300	.	1,800
Totals	15,695	18,191	5,568	87,544	1,933	22,674	228,440	33,829	108	286,984	....	2,068	20,000	13,700	338,124	2,725	2,660	379,277
THUNDER BAY:																		
Ft. William	14,000	6,748	*8,863	85,844	4,109	24,405	†11,515	51,000	6,002	97,031	....	..	15,000	23,000	74,252	‡33,747	5,292	151,291
Port Arthur	294,637	17,929	21,679	303,838	1,741	38,777	645,719	124,672	7,653	218,542	....	4,097	25,000	22,500	148,250	b108,465	5,897	314,209
Totals	308,637	24,067	30,473	449,682	5,850	63,182	57,234	175,672	13,655	315,573	....	4,097	40,000	45,500	222,502	142,212	1,189	465,500
RAINY RIVER:																		
Rat Portage	5,246	2,640	1,037	32,361	113	4,955	1,500	22,677	353	29,567	....	.....	.....	7,234	27,889	10,241	529	45,896

* Including $7,539 paid Sandborn re settlement of 1883. † Including $9,747 in general account ‡ Including $9,747 due sinking fund. c Amount of sinking fund in town account. b Including $45,719 due sinking fund.

FINANCIAL STATEMENT—VILLAGE MUNICIPALITIES.

TABLE X. Showing the Receipts, Disbursements, Assets and Liabilities of the village municipalities, in the Province of Ontario, for the year ending December 31, 1894.

Villages.	Receipts.									Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water and electric light rates, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Lighting of streets, water supply, and fire protection.	Other expenses of municipal government.	Streets, bridges and parks.	Buildings and other works.	Support of the poor and other charities.	Administration of justice, including police services.	County treasurer for levy.	Payments on account of schools and education.	Sinking fund and other investments.
ESSEX:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Belle River	1,364	99	.....	.....	100	.....	.....	185	1,748	141	.....	101	92	94	44	.....	111	649	.....
Kingsville	7,455	301	.....	1,943	5,185	.....	18,320	1,725	34,929	469	213	336	530	19,802	37	25	746	1,560	.....
Totals	8,819	400	.....	1,943	5,285	.....	18,320	1,910	36,677	610	213	437	622	19,896	81	25	857	2,209	.....
KENT:																			
Thamesville	2,695	224	.....	.....	1,200	.....	.....	607	4,726	661	396	120	628	533	6	..	.....	1,282	.....
Tilbury	4,783	295	2,179	1,180	2,521	.....	2,057	276	13,291	277	2,689	112	494	2,757	136	18	201	1,375	1,403
Wallaceburg	11,961	892	.....	.....	3,400	.....	.....	111	16,364	1,044	1,319	330	2,613	.....	187	420	775	4,218	.....
Totals	19,439	1,411	2,179	1,180	7,121	.....	2,057	994	34,381	1,922	4,404	562	3,135	3,290	329	438	1,076	6,905	1,403
ELGIN:																			
Dutton	3,186	109	.....	.....	1,000	.....	.....	546	4,841	128	.....	452	1,101	203	27	.....	261	1,133	.....
Port Stanley	2,269	246	.....	.....	90	.....	.....	158	3,513	214	34	84	774	61	13	4	197	760	.....
Springfield	1,278	63	.....	.....	.....	.....	.....	536	1,877	100	21	66	562	.....	2	2	161	528	....
Vienna	1,421	84	.....	8	.....	.....	.....	541	2,054	79	.....	88	246	.....	3	.....	165	641	..
Totals	8,094	502	.....	8	1,900	.....	.....	1,781	12,285	521	55	690	2,683	264	45	6	784	3,062	...
NORFOLK:																			
Delhi	2,091	69	.....	.....	.....	.....	.....	240	2,400	95	.....	186	459	.....	25	.....	235	995	.....
Port Dover	5,830	282	.....	.....	500	.....	.....	193	6,805	269	...	78	757	.....	78	....	386	2,531	...
Port Rowan	2,043	68	....	....	595	1,050	.....	166	3,822	108	287	81	395	.....	.....	15	188	1,775	....
Waterford	6,190	225	.....	4	1,000	.....	.....	640	8,059	285	293	417	1,279	... ...	57	22	506	2,555	... ...
Totals	16,154	644	.....	4	2,025	1,050	.....	1,239	21,116	757	580	762	2,890	.....	160	37	1,315	7,856	.
HALDIMAND:																			
Caledonia	3,451	403	.....	50	.....	.....	.....	1,821	5,725	339	97	129	518	.....	14	...	248	2,300	
Cayuga	3,052	315	.....	16	.....	.....	5,000	719	9,102	321	194	136	551	2,496	66	....	154	1,710	2,675
Dunnville	9,757	596	697	.....	4,173	....	.....	177	15,400	998	1,925	408	3,089	316	591	244	560	3,215	
Hagersville	4,195	122	.....	.....	1,482	.....	.....	61	5,860	147	224	148	1,116	... .	9	.....	182	1,603	.....
Totals	20,455	1,436	697	66	5,655	...	5,000	2,778	36,087	1,805	2,450	821	5,274	2,812	680	244	1,144	8,868	2,675

TABLE X. FINANCIAL STATEMENT—VILLAGE MUNICIPALITIES.—*Continued.*

Villages.	Disbursements.—*Continued.*					Assets.					Liabilities.							
	Debentures redeemed.	Refund of moneys borrowed for current expenditure.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
ESSEX:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Belle River		100	3	67	1,402	346	384		1,000		1,730		311					20	331
Kingsville	3,161	5,669	1,893	284	34,716	213	5,637	9,860	42,201	199	58,110			7,717	6,404	35,743		592	50,456
Totals	3,161	5,769	1,896	351	36,118	559	6,021	9,860	43,201	199	59,840		311	7,717	6,404	35,743		612	50,787
KENT:																			
Tecumseh	544		492	176	4,688	38	3,207		19,800	280	23,425	278	1,650		3,629	4,317	1,225	113	11,202
Tilbury	1,481	400	1,918	348	13,015	278	3,624	809	28,653	3,479	36,463	280			4,302	15,884	3,134	971	24,716
Wallaceburg	2,200	732	2,301	568	16,233	71	18,416		52,800	400	51,687	720	4,895	5,672	11,956	6,982	14,360	849	45,354
Totals	4,425	1,132	3,921	1,092	33,936	387	24,247	809	75,673	4,459	105,575	1,258	6,545	5,672	19,977	27,181	18,726	1,913*	81,272
ELGIN:																			
Dutton	91	1,000	169	96	4,661	180	199		8,000		8,379				2,673				2,673
Port Stanley	213	360	76	41	3,351	142	796		3,601	13	4,552		35			705		130	870
Springfield				18	1,360	417	246		4,114	27	4,804	200						97	297
Vienna				198	1,420	634	586		4,630		5,850		127					94	221
Totals	304	1,360	245	353	10,912	1,373	1,827		20,345	40	23,585	200	162		2,673	705		321	4,070
NORFOLK:																			
Delhi					1,295	405	533		4,500	9	5,447	853							853
Port Dover	541	550	483	619	6,242	566	318		12,000		12,881		600		2,593	7,348		977	11,517
Port Rowan		125	15	448	8,847	15	256		5,035		5,706				1,050			184	1,234
Waterford	849	1,000	337	745	8,016	13			19,740	364	20,117			1,445	10,413	6,411		655	18,924
Totals	1,381	2,025	835	1,522	20,120	936	1,107		41,275	373	43,751	353	600	1,445	14,056	13,762		1,816	32,031
HALDIMAND:																			
Caledonia	500		405	45	4,887	1,040	352		15,590		16,992			8,000					8,000
Cayuga				318	8,464	641		2,675	10,100		13,416				5,000				5,000
Dunnville	2,000	1,000	1,000	308	13,000		4,773		28,800	959	34,572		1,960			13,196	4,173	939	20,268
Hagersville	210	1,082	317	26	5,134	726	940		6,475		8,141		854		5,218		429	103	6,584
Totals	2,710	2,782	1,862	647	33,600	2,407	6,065	2,675	65,975	959	73,031		2,814	8,000	5,218	18,196	4,582	1,042	39,852

* Including $364, deficit of late treasurer.

TABLE X. FINANCIAL STATEMENT—VILLAGE MUNICIPALITIES.—*Continued.*

Villages.	Receipts.									Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water and electric light rates, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Lighting of streets, water supply, and fire protection.	Other expenses of municipal government.	Streets, bridges and parks.	Buildings and other works.	Support of the poor and other charities.	Administration of justice, including police services.	County treasurer for levy.	Payments on account of schools and education.	Sinking fund and other investments.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
WELLAND :																			
Chippawa	1,715	324	.....	6	.....	.....	.....	478	2,523	149	6	133	619	.....	12	....	171	993	....
Fort Erie	2,974	396	.....	78	461	.....	.....	180	4,089	312	.....	309	774	.....	28	16	175	1,560	.....
Niagara Falls S.	6,153	99	612	.....	1,000	.....	.....	1,100	8,964	317	1,071	365	1,103	292	28	14	305	1,890	.....
Port Colborne	4,144	441	.....	.....	400	1,000	.....	451	6,436	300	297	80	1,257	.....	12	.....	462	2,837	.....
Totals	14,986	1,260	612	84	1,861	1,000	.....	2,209	22,012	1,078	1,374	887	3,733	292	80	30	1,113	7,280	.....
LAMBTON :																			
Alvinston	4,617	706	.....	.....	1,400	....	2,500	2,313	11,536	850	290	197	1,156	430	24	16	246	1,767	.....
Arkona	906	252	.....	.....	100	.....	.....	332	1,590	50	7	78	389	.....	3	52	162	†	....
Oil Springs	3,926	358	.....	.....	3,676	.....	.....	*1,540	9,550	464	13	332	499	.....	123	37	309	1,364	.....
Point Edward	3,498	373	.....	.....	1,000	.....	.....	59	4,930	317	135	136	599	305	242	394	.....	†	.....
Thedford	1,703	58	....	.....	800	....	.....	71	2,632	109	6	74	430	.....	14	10	177	803	....
Watford	6,074	729	.....	.....	2,050	7,000	.....	1,080	16,933	610	617	607	457	.....	11	115	780	9,006	.....
Wyoming	3,684	336	.....	.....	1,100	.....	.....	150	5,270	275	.....	100	900	.....	40	.....	256	1,551	.....
Totals	24,408	2,812	.....	.....	10,126	7,000	2,500	5,595	52,441	2,705	1,068	1,524	4,430	735	457	624	1,930	14,491	.....
HURON :																			
Bayfield	1,443	95	.....	.....	.....	.....	.....	338	1,876	158	.....	64	395	.....	106	.....	145	800	....
Blyth	5,607	312	....	297	‡3,168	.....	.....	1,345	10,724	42	801	210	742	284	89	.....	435	2,440	§3,575
Brussels	6,271	564	.....	379	.....	.....	5,000	2,544	14,758	487	408	1,078	818	.....	287	80	399	1,595	1,677
Exeter	7,124	484	.....	35	900	.....	.....	3,154	11,697	578	823	282	1,053	.....	145	58	590	2,924	....
Wroxeter	1,636	149	.....	72	.....	.....	.....	121	1,978	183	.....	30	245	.....	3	.....	140	592	472
Totals	22,076	1,604	.....	783	4,068	.....	5,000	7,502	41,033	1,829	1,530	1,664	3,183	284	630	138	1,709	8,281	5,724
BRUCE :																			
Chesley	5,986	301	....	8	1,000	.....	.....	283	7,578	526	587	333	470	.....	43	41	257	1,095	....
Lucknow	6,447	716	.....	20	1,500	.....	.....	241	9,154	347	1,142	203	987	.....	27	242	.....	1,576	692
Paisley	4,093	708	....	5	702	.....	.....	427	5,935	443	436	248	2,096	.....	19	78	426	1,753	.....
Port Elgin	7,179	662	.....	492	3,600	....	.....	1,192	13,125	590	721	426	378	.....	35	...	440	2,450	.....

* Including $774 dividend from late treasurer's estate and including $715 balance in hands of late treasurer, not previously reported. † Paid after Dec. 31.
‡ Including $2,868 borrowed from sinking fund. § Including $2,868 in village account.

TABLE X. FINANCIAL STATEMENT—VILLAGE MUNICIPALITIES.—*Continued.*

Villages.	Disbursements.—*Continued.*					Assets.						Liabilities.							
	Debentures redeemed.	Refund of moneys borrowed for current expenses.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
WELLAND:																			
Chippawa	.....	.....	.....	38	2 121	402	141	561	6 250	18	7,312	.....	.....	.....	.....	.....	.....	.....	.....
Fort Erie	318	..	487	112	4,689	.....	1,178	.....	11,778	100	13,061	.....	.....	.....	.....	9,380	401	108	9,889
Niagara Falls	642	1,000	500	518	7,846	1,119	211	.....	21 000	60	22,390	...	638	.....	.....	8,723	540	..	9,901
Port Colborne	370	400	43	145	6,178	248	151	.....	5,404	.....	5,803	.....	1	.....	.....	1,976	.....	...	1,977
Totals	1,330	1,400	1,028	613	20 243	1,769	1,676	561	44,472	238	48,656	.....	639	...	...	19,179	1,661	108	20,927
LAMBTON:																			
Alvinston	988	2,500	710	*1,297	10 271	1,265	19	.....	9.279	...	10,563	.....	.....	1,160	2,16	1,580	600	17	5,525
Arkona	110	100	22	109	1 072	518	211	.....	4 150	...	4 879	...	630	...	...	100	.....	...	880
Oil Springs	518	2,000	329	†3,562	9,559	...	4 842	.....	7,300	‡2 449	14,591	309	...	9,350	1,539	1,629	1,400	1 697	22,327
Point Edward	..	872	20	20	3,040	1,290	1 080	.....	9 950	...	12,320	.....	1 926	.....	...	...	1,000	35	2,961
Thedford	..	875	54	110	2,930	42	14	...	1 050	...	1 106	...	...	...	...	...	...	...	...
Watford	470	2,900	624	611	16 744	189	170	.....	24,575	393	25,327	.....	.....	...	13,404	1 855	...	...	15,259
Wyoming	540	1,124	171	38	5,071	199	1,151	....	6,500	....	7,850	.....	...	...	...	1 660	721	50	2,431
Totals	2,628	10,189	1,810	5,747	48,338	4,103	7,467	...	62 804	2,842	77,216	309	2,666	10,450	17,508	9,904	6,787	1 793	49,363
HURON:																			
Brussels	5,000	..	2,388	180	14,305	400	.....	7,377	6,000	389	14 169	.....	.....	.....	.....	8,300	2,848	...	11,888
Exeter	302	900	833	142	8 180	3,567	156	...	17,800	.....	21 523	...	2,416	9 698	.....	6,560	.....	...	18,674
Wroxeter	..	...	240	4	1,989	69	297	1,872	3,000	....	5,238	..	....	4,000	.....	.....	.....	...	4,000
Totals	5,527	1,400	3,983	467	36,349	4,684	1,687	15,388	35,750	389	57,848	866	2,416	13,698	.....	47,009	2,848	...	66,842
BRUCE:																			
Chesley	372	1,000	265	1,499	6,598	980	..	..	9,200	....	10 180	..	700	.....	372	4,172	.....	a4,131	9,375
Lucknow	..	505	1,176	119	6,958	2,190	1,822	7,070	26 800	...	37,904	.....	.....	.....	.....	18,500	1,500	.....	21,000
Paisley	500	400	271	69	5,131	104	1,800	...	25,600	..	27,500	...	...	.....	635	4,077	302	..	5 014
Port Elgin	1,562	3,930	1,147	1,152	12,851	274	3,086	p2,479	15,900	611	22,350	..	2,650	.....	6 810	**2,891	715	48	20,630

* Including $1,200 borne to G. T. R. † Being balance late treasurer's deficit—the total deficit from 1888 to Dec. 31, 1894, per Commissioner Laing's special report being $4,988. ‡ Including $2,044 estimated value late treasurer's estate. § Including $2,858 on village account. ‖ Including $611 deficit of late treasurer. p Owing to sale of mill this asset depreciated $5,602. ** Omitting $40 overstated in 1893. a Due Elderslie township for share of railway debt.

TABLE X. FINANCIAL STATEMENT—VILLAGE MUNICIPALITIES.—*Continued.*

Villages.	Receipts.									Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water and electric light rates, etc.	Refund of money invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Streets, bridges and parks.	Buildings and other works.	Support of the poor and other charities.	Administration of justice, including police services	County treasurer for levy.	Payments on account of schools and education.	Sinking fund and other investments.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
BRUCE.—*Continued.*																			
Southampton	3,462	289	...	105	...	...	...	3,071	6,927	297	250	268	901	...	129	26	264	1,600	...
Tara	3,601	261	...	3,392	...	...	...	54	7,308	145	340	141	161	...	85	20	253	1,321	480
Teeswater	4,490	632	104	...	750	...	...	1,519	7,495	231	1,363	364	432	...	39	68	298	2,136	459
Tiverton	1,592	140	...	...	1,200	...	...	...	2,932	90	...	155	232	...	...	13	147	1,400	...
Totals	36,850	3,709	104	4,252	8,752	...	...	6,787	60,454	2,679	4,839	2,078	4,654	...	372	494	2,185	13,331	1,522
GREY:																			
Dundalk	2,342	278	...	49	2,500	...	2,500	371	8,040	344	...	323	368	...	26	9	345	863	...
Markdale	2,054	284	...	...	...	...	...	432	2,770	178	...	107	573	183	20	10	202	494	...
Totals	4,396	562	...	49	2,500	...	2,500	803	10,810	522	...	430	941	183	46	19	547	1,357	...
SIMCOE:																			
Allandale	3,468	255	...	...	500	...	...	692	4,915	154	...	151	1,015	...	...	...	172	1,089	...
Beeton	1,840	175	340	...	...	...	3,500	*16,442	22,297	61	425	136	588	17,998	4	62	...	849	...
Bradford	5,593	322	...	131	304	...	2,400	476	9,226	523	277	273	818	2,490	15	...	285	2,250	221
Creemore	1,784	188	...	...	...	...	...	324	2,296	166	...	110	633	...	24	...	280	694	...
Tottenham	2,811	199	...	...	715	...	...	1,882	5,607	84	120	92	627	1,506	55	...	176	1,250	...
Totals	15,496	1,139	340	131	1,519	...	5,900	19,816	44,341	988	822	762	3,681	21,994	98	62	883	6,102	221
MIDDLESEX:																			
Ailsa Craig	2,564	249	...	5	600	...	...	128	3,546	245	155	97	320	9	7	6	267	1,210	5
Glencoe	5,945	541	...	...	3,350	...	...	244	10,080	292	490	149	1,235	...	12	80	...	1,929	...
London West	7,794	272	...	...	2,923	...	10,500	1,975	23,464	465	857	173	560	...	161	108	2,779	2,695	...
Lucan	3,731	266	...	94	390	...	...	1,009	5,490	183	175	91	582	58	8	58	263	1,511	363
Newbury	1,191	165	...	...	...	...	...	358	1,714	50	39	37	177	19	37	6	330	264	...
Wardsville	1,255	134	...	...	150	...	...	34	1,573	125	...	60	255	...	...	...	128	743	...
Totals	22,480	1,627	...	99	7,413	...	10,500	3,748	45,867	1,330	1,716	597	3,129	86	225	258	3,767	8,372	368

* Including $16,012 balance from 1893, being chiefly proceeds of waterworks debentures.

TABLE X. FINANCIAL STATEMENT—VILLAGE MUNICIPALITIES.—*Continued.*

Villages.	Disbursements—*Continued.*					Assets.						Liabilities.							
	Debentures redeemed.	Repayment of moneys borrowed for current expenses.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures	Loans for current expenses and interest	Miscellaneous.	Total liabilities
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
BRUCE—*Con.*																			
Southampton	298		881	298	4,692	2,335	1,065	2,500	9,200	....	15,040	.....	1,500	.....	.....	6,291		..	7,791
Tara	3,159	..	405	703	7,297	11	..	3,207	150	....	3,368	.....	.....	.....	.....	3,600	....	2,480	6,080
Teeswater	....	750	494	40	6,655	860	101	450	18,710	....	20,121	.....	.....	.....	.....	9,000	..	150	9,150
Tiverton	.....	11	242	331	2,591	341	437	1,500	4,000	....	6,278	.....	..	.....	.....	3,000	1,781	....	4,781
Totals	5,951	6,625	4,321	4,301	53,353	7,101	8,287	17,192	103,569	611	142,751	....	4,850	....	7,817	59,594	4,298	7,242	83,891
GREY:																			
Dundalk	199	3,221	186	1,852	7,736	304	344	.....	3,300	....	3,948	...	267	..	....	2,391	..	3,079	5,647
Markdale	113	...	257	209	2,486	284	756	.....	7,454	73	8,568	203	385	..	4,783	.....	.....	...	5,371
Totals	392	3,221	443	2,121	10,222	588	1,101	.....	10,754	73	12,516	203	652	..	4,783	2,391	....	3,079	11,018
SIMCOE:																			
Allandale	..	800	..	324	3,70	1,210	1,116	..	3,200	96	5,666	...	1,175	..	....	.....	500	1,573	3,248
Barton	624	.....	870	400	21,067	230	522	2,137	27,690	363	30,952	83	..	..	....	19,612	..	320	20,015
Bradford	291	.....	514	124	8,051	1,175	2,787	2,921	18,300	..	24,983	258	1,250	..	8,309	2,400	364	551	13,072
Cromarty	..	..	..	360	2,267	29	948	.....	4,098	..	5,075	..	374	..	....	.....	..	1,471	1,845
Tottenham	295	715	200	49	5,419	188	109	.....	7,200	..	7,497	..	..	..	3,123	2,000	..	10	5,133
Totals	1,310	1,515	1,724	1,247	41,409	2,932	4,976	5,058	60,658	459	74,123	341	2,799	..	11,432	24,042	864	3,925	43,343
MIDDLESEX:																			
Adsa Craig	311	600	164	150*	3,021	23	42	576	4,475	18	5,136	..	..	..	..	1,016	899	..	1,915
Glanworth	722	3,350	781	165	9,018	1,067	200	..	16,000	..	17,432	1,079	122	....	8,985	1,130	....	69	11,385
London West	..	12,216	1,676	*485	22,453	1,419	4,049	..	11,450	..	16,918	503	..	..	5,000	34,500	..	.....	40,003
Lucan	.....	.....	538	58	3,308	1,582	478	1,491	14,900	.....	18,451	203	.....	....	10,800	..	390	.....	11,453
Newbury	60	..	4	187	1,310	404	436	..	5,000	..	5,840	149	..	..	2,400	600	....	406	3,555
Wardsville	..	150	5	7	1,465	149	286	.....	6,200	....	6,596	112	235	.....	.....	.....	....	12	359
Totals	1,093	16,316	2,991	1,027	41,275	4,592	5,651	2,067	57,725	18	70,053	2,046	357	..	28,241	37,089	390	487	68,610

*Including sundry shortages in late treasurer's accounts.

TABLE X. FINANCIAL STATEMENT—VILLAGE MUNICIPALITIES.—*Continued.*

Villages.	Receipts.									Disbursements								
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water and electric light rates, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Streets, bridges and parks.	Buildings and other works.	Support of the poor and other charities.	Administration of justice, including police service.	County treasurer for levy.	Payments on account of schools and education.	Sinking fund and other investments.
OXFORD:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Embro	2,374	400			400			383	3 557	167		97	646	222	18	131	305	890	
Norwich	8,227	380		49	2,600		*2,300	694	12,250	268	2,346	360	886	†2,300	122	26	458	1,619	207
Totals	8,601	780		49	3,000		2,300	1,077	15,807	435	2,346	457	1,532	2,522	140	157	763	2,509	207
PERTH:																			
Milverton	1,646	198						634	2,478	188	22	46	839			25	182	768	
WELLINGTON:																			
Arthur	5,734	559			2,584			570	9,447	561		137	234	264			474	2,357	567
Clifford	1,853	251		13				2 8	2,375	170	52	58	456		4	23	261	1,000	13
Drayton	3,152	435		400	1,450			169	5,596	132	78	161	9:0	10	2	44	531	1,217	
Elora	7,928	917						1,488	10,333	350	457	461	547	839	20	373	1,598	2,799	
Erin	1,172	148			300			125	1,745	99	8	76	447		48	15	168	540	
Fergus	8,491	948		2,475	350			147	12,411	433	660	260	1,520	30	13	428	822	3,970	1,810
Totals	28,330	3,258		2,888	4,684			2,747	41,907	1,745	1,255	1,153	4,134	1,143	87	883	3,854	11,883	2,390
WATERLOO:																			
Ayr	4,616	192		103				19	4,930	152	113	229	666		15	10	363	2,200	440
Elmira	3,070	190		20				229	3,509	167		77	711			38	251	930	
Hespeler	6,216	141		5	400			1,112	7,874	164	464	80	1,328		5	300	429	2,343	
New Hamburg	5,619	348			1,377			‡876	8,250	207	810	169	544	473		110	354	2,000	
Preston	8,536	496		185	4,150			§1,513	14,880	767	895	465	1,492			197	631	3,027	781
Totals	28,087	1,367		313	5,927			3,749	39,443	1,457	2,282	1,020	4,741	473	20	655	2,028	10,500	1,221
DUFFERIN:																			
Shelburne	5,172	613		1,240	1,000			1,021	9,046	517	478	201	422	32	35		604	1,879	
LINCOLN:																			
Beamsville	3,044	285		70	2,750		13,000	1,592	20,741	132	189	159	658	2,570	23	17	457	1,700	11,345
Grimsby	4,393	246			1,500			77	6,216	254	289	205	674		26	5	519	1,920	

*For fire engine, issued 1893, but omitted from report. †Fire engine bought in 1893, but omitted from report. ‡Chiefly rebate from county for bridge.
§ Including $1,100 from street railway for opening a street.

TABLE X FINANCIAL STATEMENT-VILLAGE MUNICIPALITIES.—*Continued.*

Villages	Disbursements—*Continued.*					Assets.						Liabilities.							
	Debentures redeemed.	Refund of moneys borrowed for current expenses.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Cash on treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Oxford—																			
Innisfil	141	400	189	71	3,398	319			11,000		11,319		698			3,283		9	3,990
Norwich	182	2,000	412	198	11,982	268	58	1,546	*9,400		11,272					6,818			6,818
Totals	1,951	3,188	502	267	15,220	587	58	1,546	20,400		22,591		698			10,101		9	10,808
Peel—																			
Milverton				191	2,261	217					217							1,933	1,933
Wellington—																			
Arthur	554	3,468	1,207	199	9,179	288	2,617	567	22	14	3,488	428		5,000	5,236	8,500	2,134	91	21,419
Clifford				4	2,041	854	434	358	3,265		4,391								
Drayton	634	1,450	284	83	3,836		742	800	8,275	25	9,842				2,435	800			3,235
Elora	700		1,000	350	9,769	794	4,269		17,000	100	22,163		1,79	7,000		9,300		229	18,322
Fen		218	14	6	1,795	10					10								
Fergus	294	410	1,353	152	12,255	156	3,629	14,108	24,700	414	43,007	788	1,569	15,000		4,383	361	754	22,855
Totals	2,822	4,843	3,150	1,118	40,345	1,562	11,691	15,833	53,262	553	82,871	1,246	3,362	27,000	7,671	22,983	2,495	1,074	65,831
Waterloo—																			
Ayr			6	50	4,883	17	345	2,304	9,255		11,951				10,200				10,200
Elmira	500		470	400	3,254	906		500			756			9,200					9,200
Hespeler	1,170	400	798	200	7,600	181	325		24,869		25,375				7,364	4,805			12,169
New Hamburg	600	1,577	416	140	7,108	1,032			15,960	156	17,148					7,111	400		7,511
Preston	5,000	3,000	1,440	841	14,879	1	45	5,423	24,881	75	39,425		1,454		9,170	11,715	1,150	362	23,851
Totals	7,270	5,777	3,130	1,731	37,724	1,977	715	8,227	74,965	231	85,655		1,454	9,200	26,734	23,631	1,550	362	62,931
Dufferin—																			
Shelburne	1,688	1,200	1,170	293	8,416	631	2,670	3,309	27,621	198	34,426	491	1,330		726	19,824		970	23,361
Lincoln—																			
Beamsville	114	5,750	200	150	20,481	267	17	†11,345	9,170	33	20,822				1,857	13,000	1,035	34	15,926
Grimsby	600	1,500	170	25	6,130	26	143		4,000	10	4,173	834			200	1,700			2,734

*Fields factory formerly included as an asset has been disposed of to operator as a bonus. †Being amount of special deposit re debenture sale.

TABLE X. FINANCIAL STATEMENT—VILLAGE MUNICIPALITIES.—*Continued.*

Villages	Receipts.									Disbursements.									
	Municipal and school taxes.	Licenees, fees, rents, fines, etc.	Water and electric light rates, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Streets, bridges and parks.	Buildings and other works.	Support of the poor and other charities.	Administration of justice, including police service.	County treasurer for levy.	Payments on account of schools and education.	Sinking fund and other investments.
LINCOLN.—*Con.*	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Merritton	12,816	236	2,585	.....	207	....	.....	353	16,197	605	1,725	687	1,974	475	5	480	925	3,327	....
Port Dalhousie	2,993	579	....	.....	1,200	.....	.....	1,157	5,929	245	....	93	397	413	.....	113	....	1,299	....
Totals	23,246	1,346	2,585	70	5,657	.....	13,000	3,179	49,084	1,236	2,203	1,144	3,703	3,458	51	615	1,901	8,246	11,345
WENTWORTH:																			
Waterdown	1,277	133	.....	.....	.....	.....	.....	938	2,348	105	.....	56	786	.....	80	20	112	566	.....
HALTON:																			
Acton	4,344	479	.....	15	500	.....	.....	431	5,769	535	56	189	704	373	15	3	214	1,600	15
Burlington	5,142	461	10	74	.....	.....	2,500	*5,066	13,253	647	322	496	813	2,852	141	104	322	1,633	.....
Georgetown	7,943	492	899	..	.....	.....	.....	†2,223	11,557	575	461	289	1,143	704	3	9	310	3,133	....
Totals	17,429	1,432	909	89	500	.....	2,500	7,720	30,579	1,757	839	974	2,660	3,929	159	116	849	6,366	15
PEEL:																			
Bolton	2,300	399	.....	.....	1,088	....	.....	.....	3,787	231	23	191	673	.....	17	35	121	1,145	....
Streetsville	1,903	212	....	....	.....	.....	.....	383	2,498	398	.....	88	426	125	10	19	128	1,047	...
Totals	4,203	611	.....	.....	1,088	.....	.....	383	6,285	629	23	279	1,099	125	27	54	249	2,192	.....
YORK:																			
East Toronto	3,850	167	784	.....	5 709	....	8,000	508	19,018	991	574	689	745	321	....	.....	492	3,0 0	391
Holland Landing	858	90	.....	....	150	....	.....	207	1,305	119	...	61	127	.....	.....	.....	217	500	.....
Markham	6,321	406	1,188	.....	3,054	.....	.....	314	11,283	188	1,797	2,132	379	.....	11	18	334	1,300	.....
Richmond Hill	2,077	445	.....	842	250	.....	.....	162	3,776	409	50	115	443	.....	12	.....	258	1,117	800
Stouffville	3,425	219	.....	.....	.....	1,500	.....	253	5,397	159	...	102	803	....	.....	....	376	3 073	....
Sutton	2,342	102	.....	....	250	.....	.....	309	3,003	198	20	71	503	.....	.....	.....	165	602	....
Weston	4,535	499	....	.....	.....	.....	.....	1,889	6,923	319	40	476	840	.....	24	9	442	2,921	...
Woodbridge	1,231	160	.....	320	.....	7,000	.....	593	9,304	149	...	99	671	.....	23	.....	.....	7,085	200
Totals	24,639	2,088	1,972	1,162	9,413	8,500	8,000	4,235	60,009	2,532	2,481	3,725	4,511	321	70	27	2,264	19,598	1,391

*Including $1,617, share of bonus recovered by county from G. T. Ry. Co., and $2,000, bequest to poor from late Mr. Geo Long, and $515, refund of treasurer's deficit in part. †Including $2,156, share of bonus recovered by county from G. T. Ry. Co.

TABLE X. FINANCIAL STATEMENT—VILLAGE MUNICIPALITIES.—*Continued.*

Villages	Disbursements.—*Continued.*					Assets.						Liabilities.							
	Debentures redeemed.	Refund of moneys borrowed for current expenses.	Interest on loans, and arrears and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
LINCOLN.—*Con.*	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Merritton	2,295	...	3,524	265	16,197	...	318	.....	95,825	473	96,666	...	...	...	9,686	61,276	207	...	71,179
Port Dalhousie	138	1,400	415	918	5,611	318	1,688	.....	5,360	201	8,107	1,458	...	...	...	7,403	.....	343	9,404
Totals	3,129	5,650	4,366	1,368	48,488	597	2,156	11,345	114,895	717	129,708	2,292	...	...	11,753	83,579	1,242	377	99,243
WENTWORTH:																			
Waterdown	...	...	...	142	1,867	481	1,082	...	6,400	7	7,970	...	...	...	...	.....	...	.....	.....
HALTON																			
Acton	300	500	650	70	5,253	556	539	400	22,540	983	24,678	...	...	...	5,500	6,690	...	.....	12,190
Burlington	149	28	215	1,689	9,454	3,739	192	...	18,616	973	18,580	...	...	...	...	2,301	.....	...	2,301
Georgetown	500	1,360	2,704	114	11,310	247	1,257	.....	71,200	...	72,804	...	...	...	12,000	40,100	...	.....	52,100
Totals	999	1,888	3,567	1,882	25,997	4,582	1,988	400	107,416	1,956	116,042	...	.....	.....	17,500	49,091	.....	...	66,591
PEEL:																			
Bolton	105	1,079	84	83	3,787	...	...	.....	6,870	50	6,950	...	...	.....	...	905	138	.....	1,041
Streetsville	...	...	...	45	2,286	212	493	.....	1,165	...	1,870	...	238	...	.....	.....	.....	70	308
Totals	105	1,079	84	128	6,073	212	493	.....	7,735	50	8,470	...	238	...	...	905	138	70	1,349
YORK:	500																		
East Toronto		8,240	2,886	189	19,018	...	13,595	1,654	27,634	23,686	67,879	...	...	...	...	53,200	11,211	139	65,150
Holland Landing	...	...	...	4	1,928	277	242	...	2,400	...	2,899	...	...	...	...	...	155	...	155
Markham	864	8,030	1,222	18	11,288	...	298	...	33,800	97	34,195	...	.....	...	5,976	14,788	54	104	20,922
Richmond Hill	...	250	5	84	3,543	238	...	800	9,479	...	10,512	...	...	...	...	...	...	...	...
Streetsville	137	...	56	120	4,896	591	137	...	...	...	728	...	...	...	1,500	979	...	144	2,623
Sutton	...	250	10	740	2,588	445	141	...	4,000	...	4,589	...	312	...	...	...	...	...	312
Weston	639	...	691	229	6,616	316	767	...	19,000	...	20,076	58	221	...	11,802	2,004	...	...	13,605
Woodbridge	...	...	...	4	8,231	1,673	244	3,534	1,650	...	6,821	182	...	...	7,400	...	619	...	7,801
Totals	2,140	11,740	4,885	1,419	87,087	2,922	15,643	9,408	98,263	21,793	147,629	240	533	...	25,778	71,321	12,039	687	110,568

[1] Including $1,111, discrepancy in accounts less $212 paid on refund I. an. written off by resolution of council. [2] Including $1,488, treasurer's deficit.
[3] Including $4,174 due sinking fund, and $1,243 not accounted for in returns at hand.

TABLE X. FINANCIAL STATEMENT—VILLAGE MUNICIPALITIES.—*Continued.*

Villages.	Receipts.									Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water and electric light rates, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Streets, bridges and parks.	Buildings and other works.	Support of the poor and other charities.	Administration of justice, including police services.	County treasurer for levy.	Payments on account of schools and education.	Sinking fund and other investments.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
ONTARIO:																			
Beaverton..	2,772	216	.....	*231	†1,400	.....	.....	261	4,883	147	48	138	897	.....	21	55	269	849	900
Cannington.	4,221	362	.....	.....	1,350	.....	.....	208	6,141	154	.....	253	1,088	.....	100	33	375	1,900	.....
Port Perry..	9,336	809	....	5	5,700	.....	.....	61	15,911	663	930	223	537	.....	216	6	545	3,558	5
Tota's ...	16,329	1,387	.....	239	8,450	.....	.....	530	26,935	964	978	614	2,522	.....	337	94	1,189	6,307	905
DURHAM:																			
Millbrook..	3,406	730	.....	.....	1,850	....	.....	221	6,207	230	371	282	1,190	172	72	103	405	1,669	.....
Newcastle..	4,624	209	.....	.....	.....	.....	.....	312	5,145	243	.....	111	1,020	.....	101	74	200	2,300	.....
Totals....	8,030	939	....	.....	1,850	.....	.....	533	11,352	473	371	393	2,210	172	173	177	605	3,969	.....
NORTHUMBERLAND:																			
Brighton...	6,574	548	....	.....	.....	.....	.....	26	7,148	366	463	400	1,061	259	76	9	325	2,600	.....
Campb'lford	16,382	724	1,559	.....	9,000	.....	.....	1,108	28,773	487	2,016	452	899	.....	41	643	500	7,605	.....
Colborne...	4,591	188	766	.....	1,550	.....	.....	749	7,844	271	1,388	112	495	.....	28	64	225	1,850	.....
Hastings...	3,453	387	.....	.....	972	....	.....	108	4,920	314	357	95	1,024	.....	37	63	187	1,142	.....
Totals....	31,000	1,847	2,325	.....	11,522	.....	.....	1,991	48,685	1,438	4,224	1,059	3,479	259	182	779	1,237	13,197	.....
PRINCE EDWARD:																			
Wellington.	1,702	175	....	.....	1,703	.....	.....	755	4,335	147	.....	146	.....	.....	123	.....	553	929	.....
LENNOX AND ADDINGTON:																			
Bath	2,557	113	....	84	326	.....	.....	74	3,154	178	.....	91	171	.....	59	.....	775	1,534	.....
Newburgh	3,533	75	....	.....	.....	....	.....	209	3,817	119	.....	85	312	.....	18	.....	399	1,300	1,000
Totals....	6,090	188	.....	84	326	.....	.....	283	6,971	297	.....	176	483	.....	77	.....	1,174	2,834	1,000

* Share of interest from Thorah's stock in G. T. Ry. † Including $800 from sinking fund.

TABLE X. FINANCIAL STATEMENT—VILLAGE MUNICIPALITIES.—*Continued.*

Villages.	Disbursements.—*Continued.*					Assets.						Liabilities.							
	Debentures redeemed.	Refund of moneys borrowed for current expenses.	Interest on loans, advances and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
ONTARIO.																			
Beaverton	475	600	361	101	4,861	22	327	2,400	5,525	7,790	16,064	.....	...	1,600	2,200	3,500	*1,300	.....	8,600
Cannington	283	1,350	286	195	6,017	124	164	.....	11,406	88	11,782	.....	.....	.....	.....	4,732	.....	267	4,999
Port Perry	...	6,500	2,596	6	15,785	126	2,549	1,005	25,750	....	29,430	....	208	20,000	12,000	11,000	1,200	.....	44,408
Totals	758	8,450	3,243	302	26,663	272	3,040	3,405	42,681	7,878	57,276	.....	208	21,600	14,200	19,232	2,500	267	58,007
DURHAM.																			
Millbrook	189	200	289	719	5,991	216	3,582	.....	15,300	1,246	20,344	.....	1,562	.....	4,799	.....	1,550	...	7,911
Newcastle	...	.....	.....	66	4,115	1,030	21	.....	13,000	.....	14,051	.....	400	....	.....	.....	...	...	400
Totals	189	200	289	785	10,106	1,246	3,603	.....	28,300	1,246	34,395	.....	1,962	.....	4,799	.....	1,550	...	8,311
NORTHUMBERLAND.																			
Brighton	700	289	213	146	6,907	241	262	.....	14,760	....	15,263	.....	.....	.....	1,529	.....	.....	.....	1,629
Campbellford	1,795	16,200	2,647	745	28,031	742	2,901	.....	55,475	2,758	61,876	....	.....	.....	14,605	28,312	2,042	1,801	46,760
Colborne	600	1,550	582	102	6,967	877	8	.....	12,340	....	13,225	....	....	.....	.....	3,100	.....	478	3,578
Hastings	500	868	156	168	4,929	.....	194	....	7,800	....	7,994	.....	.....	1,445	.....	410	104	....	1,959
Totals	3,095	12,907	3,298	1,161	46,825	1,860	3,365	.....	90,375	2,758	98,358	.....	.....	1,445	16,134	31,822	2,146	2,279	53,826
PRINCE EDWARD.																			
Wellington	125	1,100	73	†1,139	4,335	....	28	.....	5,000	.....	5,028	.....	.....	625	.....	.....	1,103	....	1,728
LENNOX AND ADDINGTON.																			
Bath	...	325	11	10	3,154	...	113	.....	6,900	15	7,028	.....	.....	...	...	.....	1	...	1
Newburgh	...	.....	371	...	3,604	213	2,414	1,000	6,200	...	9,827	...	.....	7,000	.....	.....	...	...	7,000
Totals	...	325	382	10	6,758	213	2,527	1,000	13,100	15	16,855	.....	.....	7,000	.....	.....	1	.....	7,001

* Including $810 due sinking fund.
† Including $999 deficit on payment of school debentures by former village treasurer, but previously reported by auditors as having been paid.

TABLE X. FINANCIAL STATEMENT—VILLAGE MUNICIPALITIES.—*Continued.*

Villages.	Receipts.									Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water rates, electric light rates, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Streets, bridges and parks.	Buildings and other works.	Support of the poor and other charities.	Administration of justice, including police services	County treasurer for levy.	Payments on account of schools and education.	Sinking fund and other investments.
FRONTENAC :	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Garden Island	1,713	.....	.....	.....	.....	.....	.....	.....	1,713	25	.....	11	94	.....	.....	.....	325	1,244	.....
Portsmouth...	3,113	74	...	.....	.....	.....	.....	160	3,347	213	.....	181	696	.....	28	132	1,150	928	.....
Totals.....	4,826	74	.....	.....	.....	.....	.....	160	5,060	238	.....	192	790	.....	28	132	1,475	2,172	....
LEEDS :																			
Athens	3,583	77	....	.....	150	.....	.....	891	4,701	126	.....	82	666	354	18	24	260	1,830	.....
Newboro	1,719	176	...	1,676	201	.....	.....	747	4,519	24	.....	90	263	29	.....	.....	130	826	1,900
Totals.....	5,302	253	.....	1,676	351	....	.....	1,638	9,220	150	.....	172	929	383	18	24	390	2,656	1,900
GRENVILLE :																			
Cardinal	2,452	339	....	.....	300	...	.....	218	3,309	157	17	379	415	.....	47	22	.....	1,200	.....
Kemptville...	6,684	566	...	.....	1,500	...	.....	290	9,040	257	933	280	771	.....	173	50	.....	3,060	.....
Merrickville...	3,639	297	...	.....	950	.....	.....	272	5,158	230	282	213	283	53	44	27	362	1,473	.....
Totals.....	12,775	1,202	...	.....	2,750	.....	.....	780	17,507	644	1,182	872	1,469	53	264	99	362	5,673	.....
DUNDAS :																			
Chesterville....	1,305	303	.....	.....	.....	.....	.....	24	1,632	86	.....	74	626	.....	.....	.....	.....	576	.....
Iroquois.....	7,737	620	.....	.....	500	.....	.....	938	9,795	199	298	254	856	.....	76	.....	564	3,452	.....
Morrisburg....	10,253	643	1,206	.....	3,500	.....	.....	1,157	16,759	659	1,603	235	1,418	74	99	29	1,003	4,250	.....
Winchester....	3,310	329	.....	.....	200	.....	.....	458	4,297	123	.....	143	401	18	74	20	269	1,738	.....
Totals.....	22,605	1,895	1,206	.....	4,200	.....	.....	2,577	32,483	1,067	1,901	706	3,301	92	249	49	1,836	10,016	.....
GLENGARRY :																			
Alexandria....	3,608	387	.....	.....	.....	5,500	.....	1,328	11,123	190	212	164	578	264	32	131	245	7,541	.....
Lancaster	1,574	320	.....	.....	300	.....	.....	1	2,195	100	118	43	146	211	72	.....	135	810	.....
Maxville	1,572	13	.....	.....	.....	.....	.....	7	1,592	83	.....	69	36	.....	.....	.....	87	726	.....
Totals.....	7,054	720	.....	.....	300	5,500	...	1,336	14,910	373	330	276	760	475	104	131	467	9,077	...

TABLE X. FINANCIAL STATEMENT VILLAGE MUNICIPALITIES.—*Continued.*

Villages	Disbursements—*Continued.*					Assets.						Liabilities.						
	Debentures redeemed.	Refund of moneys borrowed for current expenses.	Interest on loans, and rates and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
FRONTENAC	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Garden Island	.....	.....	.....	14	1,718	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portsmouth	...	..	.	15	5,341	6	1,552	.....	3,000	...	4,558	.....	931	...	.....	.....	.....	215	1,146
Totals				27	8,059	6	1,552	.....	3,000	...	4,558	...	931	...	.....	.....	.....	215	1,146
LEEDS:																			
Athens	..	150		487	3,897	704	17		354	1,132	2,207	...	...					†3,125	3,125
Newboro	99	501	315	24	4,261	318	...	1,462	4,500	...	6,280	...	...	4,000	1,907	...	...	...	5,907
Totals	99	651	315	511	8,158	1,022	17	1,462	4,854	1,132	8,487	..	...	4,000	1,907	..	..	3,125	9,032
GRENVILLE:																			
Cardinal	277	300	238	20	3,077	252	.....	.....	10,225	..	10,477	...	..	..	3,732	450	....	..	4,202
Kemptville	..	2,100	117	15	7,000	1,344	477	....	27,188	.	29,009	423	..	..	9,570	..	..	..	9,793
Merrickville	700	700	445	30	4,642	516	2,629	...	6,500	4	9,749	374	...	7,160	.....	500	1,917	535	10,126
Totals	777	3,100	800	70	15,415	2,092	3,176	...	43,913	4	49,185	797	...	7,160	13,122	950	1,917	535	24,421
DUNDAS:																			
Chesterville				230	1,297	57	673	.....	839	26	1,595	...	391	...	.....	.....	.....	878	1,269
Iroquois	791	500	419	240	7,000	2,440	302	....	24,000	...	27,042	245	1,404	...	6,667	500	1,100	...	10,116
Morrisburg	1,210	3,340	1,020	64	16,037	697	16	....	67,853	1,936	68,502	...	...	...	7,841	27,340	...	107	35,258
Winchester	400	302	498	220	4,241	58	12	...	13,065	2,354	15,487	...	...	...	9,160	.....	318	1,183	10,661
Totals	2,415	4,342	2,880	780	29,883	3,000	1,003	..	104,227	4,366	112,556	245	1,808	...	23,668	27,840	1,418	2,165	57,304
GLENGARRY:																			
Alexandria			67	302	9,778	1,417	1,877	800	892	1,135	6,019	...	333	...	6,300	102	800	...	7,535
Lancaster		310	16	17	2,024	174	595	.....	658	109	1,494	...	567	...	.....	.....	.....	211	778
Maxville	...	70		185	1,266	350	18	....	1,200	....	1,554	98	.....	...	.....	.....	.....	123	221
Totals	..	380	78	504	13,068	1,852	2,120	800	2,790	1,255	9,097	98	900	.....	6,300	102	800	334	8,534

* Village's share of Rear of Yonge and Escott's sinking fund for railway debt. † Share of railway and school debentures payable to Rear of Yonge and Escott townships. ‡ Share of railway and bridge debentures to be paid to Winchester township.

TABLE X. FINANCIAL STATEMENT—VILLAGE MUNICIPALITIES.—*Continued.*

Villages.	Receipts.									Disbursements.									
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water rates, electric light rates, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses.	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts.	Allowances, salaries and commissions.	Lighting of streets, water supply and fire protection.	Other expenses of municipal government.	Streets, bridges and parks.	Buildings and other works.	Support of the poor and other charities.	Administration of justice, including police services.	County treasurer for levy.	Payments on account of schools and education.	Sinking fund and other investments.
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
PRESCOTT:																			
Hawkesbury.	5,557	194	.....	.....	1,042	.....	.....	500	7,293	240	80	63	2,183	.....	.....	67	455	3,704	.....
L'Orignal ...	2,388	98	.....	172	.....	.....	.....	570	3,228	179	.....	62	459	12	21	12	189	1,433	186
Totals....	7,945	292	.....	172	1,042	.....	.....	1,070	10,521	419	80	125	2,642	12	21	79	644	5,137	186
RUSSELL:																			
Casselman...	1,507	86	.....	.....	.....	.....	2,000	*3,000	6,593	173	.....	157	2,228	.....	10	.....	.....	344	.....
Rockland ...	2,237	62	.....	.....	242	.....	.....	110	2,651	100	15	50	1,049	.....	.....	.....	.....	1,400	.....
Totals....	3,744	148	.....	.....	242	.....	2,000	3,110	9,244	273	15	207	3,277	.....	10	.....	.....	1,744	.....
CARLETON:																			
Hintonburg ...	.....	88	.....	.....	1,986	.....	.....	193	2,267	378	.....	461	1,002	.....	.....	.....	.....	.....	.....
Ottawa East.	2,285	129	.....	69	.....	.....	.....	1,208	3,691	125	35	44	220	554	3	8	252	650	.....
Richmond...	1,121	27	.....	8	.....	.....	.....	8	1,164	139	.....	78	36	22	.....	.....	201	452	83
Totals....	3,406	244	.....	77	1,986	.....	.....	1,409	7,122	642	35	583	1,258	576	3	8	453	1,102	83
RENFREW:																			
Eganville ...	2,310	545	.....	.....	.....	.....	.....	156	3,011	209	12	80	920	467	.....	27	590	418	.....
LANARK:																			
Lanark	3,580	289	.....	.....	300	.....	.....	731	4 900	252	415	93	472	.....	7	75	262	1,392	.....
VICTORIA:																			
Bobcaygeon .	3,239	311	.....	39	.....	.....	.....	1,666	5,255	143	91	157	305	.....	42	374	248	1,875	474
Fenelon Falls	4,462	351	.....	81	1,219	.....	.....	166	6,279	240	19	402	726	25	21	103	362	2,285	281
Omemee ..	1,928	311	.....	.....	1,261	.....	.....	55	3,555	227	155	178	441	.....	66	34	180	614	.....
Woodville ..	1,361	186	.....	.....	200	.....	.....	339	2,086	139	19	35	326	.....	36	39	117	890	.....
Totals....	10,990	1,159	.....	120	2,680	.....	.....	2,226	17,175	749	284	772	1,798	25	165	550	907	5,664	755

* Grants for bridge, County $2,000 and Cambridge Township $1,000.

TABLE X. FINANCIAL STATEMENT—VILLAGE MUNICIPALITIES.—*Continued.*

Villages.	Disbursements—*Continued.*					Assets.						Liabilities.							
	Debentures redeemed.	Refund of moneys borrowed for current expenses.	Interest on loans, and notes and debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrear.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
PRESCOTT:	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Hawkesbury	...	444		67	7,293		470	.....	12,200	.....	12,670	....	.....	.....	.....	.....	1,042	.....	1,042
L'Orignal	...	.....	372	53	2,978	250	304	5,976	11,000	.....	17,530	.....	59	....	6,200	.....	.....	.....	6,259
Totals		444	372	110	10,271	250	774	5,976	23,20	....	30,200	....	59		6,200	.....	1 042	..	7,301
RUSSELL:																			
Cassselman	...	3,021	139	289	6,311	282	1,147	.....	750	.....	2,179	80	773	...	.....	2,000	515	..	3,368
Rockland	...	.....	.....	37	2,651	...	31	.....	.....	50	81	80	...	....	.....	.....	242	75	397
Totals	.....	3,021	139	276	8,962	282	1,178	.....	750	50	2,260	160	773		.....	2,000	757	75	3,765
CARLETON:																			
Huntsberg	...	...	33	4	1 878	389	4,224	.....	2 450	25	7,088	357	2,981	....	.....	.....	1,989	1,414	6 791
Ottawa East	100	.....	102	18	2,111	1,680	820	509	4,493	....	7,403	261	796	....	1,600	...	...	99	2,756
Richmond	.....	.....	.....	...	1,011	153	1,398	316	3,750	....	5,617	247	666	.....	2,000	....	...	...	2,913
Totals	100	.....	135	22	5,000	2,122	6,472	816	10,693	25	20,108	865	4,393	..	3,600	.....	1,989	1,613	12,450
RENFREW:																			
Eganville	146	..	116	12	2,956	55	1,863	... .	1,588	22	6,468	177	1,280	....	.....	1,739	.....	34	3,230
LANARK:																			
Lanark	84	300	269	65	4,006	894	.....	.....	13,500	...	14 394	....	...	...	4 581	433	...	...	5,014
VICTORIA:																			
Bobcaygeon	...	...	300	148	4,157	1,098	3,165	2,148	12,940	8	19,359	247	1,427	....	3,000	3 000	..	698	8,372
Fenelon Falls	1,000	200	277	179	6,219	60	3,794	2,170	14,800	50	20,874	362	2,300	..	3,000	.....	1,619	833	8,114
Lindsay	150	1,200	72	122	3,500	55	.....	.....	4,720	....	4,775	..	...		150	...	...	...	150
Woodville	...	...	2	163	1,766	320	356	... .	1,025	.....	1,761	117	52	....	.....	.....	212	752	1,133
Totals	1,250	1,481	651	612	15,642	1,533	7,315	4,318	33,485	58	46,709	726	3,779	....	6,150	3,000	1,831	2,283	17,769

* Including $1,064 to be paid to Nepean township to settle accounts.

TABLE X. FINANCIAL STATEMENT—VILLAGE MUNICIPALITIES.—*Continued.*

Villages.	Receipts.									Disbursements.								
	Municipal and school taxes.	Licenses, fees, rents, fines, etc.	Water rates, electric light rates, etc.	Refund of moneys invested, including interest.	Borrowed for current expenses	Borrowed on debentures for schools.	Borrowed on debentures for other purposes.	Miscellaneous.	Total receipts	Allowances, salaries and commissions.	Lighting of streets, water supply and fire protection	Other expenses of municipal government.	Streets, bridges and parks.	Buildings and other works.	Support of the poor and other charities.	Administration of justice, including police services.	County treasurer for levy.	Payments on account of schools and education.	Sinking fund and other investments.
PETERBORO':	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Ashburnham	8,827	811	.....	.....	4,725	....	.....	142	14,505	566	670	177	2,735	.....	180	...	923	2,355	.....
Havelock	2,214	288	..	.....	300	.....	.....	295	3,697	109	..	167	741	.....	1	6	132	1,224	.....
Lakefield	4,125	679	60	88	1,950	.....	.....	707	7,609	469	458	226	1,011	... .	102	9	502	1,619	363
Norwood	5,684	308	.....	152	.....	.....	.....	*1,540	7,684	232	689	303	331	.....	2	64	966	2,278	‡1,219
Totals	20,850	2,086	60	240	6,975	...	.....	2,684	32,895	1,376	1,817	873	4,818	.....	285	79	2,523	7,476	1,582
HASTINGS:																			
Madoc	5,029	474	.....	19	.....	.....	.....	95	5,617	219	153	145	550	.....	60	133	....	1,400	520
Stirling	3,102	214	....	.....	516	.....	.....	171	4,063	122	.....	60	313	.....	8	.....	655	1,567	200
Tweed	2,635	213	.....	.....	500	....	.....	767	4,115	194	.....	110	650	717	10	142	513	1,013	.....
Totals	10,766	901	.....	19	1,016	.. ..	.....	1,033	13,735	535	153	315	1,513	717	78	275	1,168	3,980	720
MUSKOKA:																			
Huntsville	5,210	438	.....	90	4,000	. ...	.....	†2,022	11,760	526	212	665	1,817	.....	32	21	.....	2,341	.....
PARRY SOUND:																			
Burk's Falls	2,573	63	.....	126	1,000	.. .	... .	356	4,118	• 149	.....	157	468	.....	10	10	.....	979	66
Sundridge	820	55	.....	13	.....	. ...	.....	67	955	155	. ...	40	60	121	4	15	.....	472	.....
Totals	3,393	118	.....	139	1,000	.....	.....	423	5,073	304	.....	197	528	121	14	25	.....	1,451	66

* Including $742, previous receipts omitted from returns. † Including $742, deposits previously made but omitted from returns.
‡ Including grant of $1,500 from Government to sufferers from loss by fire.

TABLE X. FINANCIAL STATEMENT—VILLAGE MUNICIPALITIES. *Continued.*

Villages.	Disbursements.—*Continued.*					Assets.						Liabilities.							
	Debentures redeemed.	Refund of moneys borrowed for current expenses	Interest on loans and unpaid debentures.	Miscellaneous.	Total disbursements.	Cash in treasury.	Taxes in arrears.	Investments in stocks, mortgages, debentures, etc.	Land, buildings and other property.	Miscellaneous.	Total assets.	County levy.	Local school rates.	Railway debentures.	School debentures.	All other debentures.	Loans for current expenses and interest.	Miscellaneous.	Total liabilities.
PETERBORO'	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Ashburnham	74	5,275	807	124	18,886	619	3,062	.....	15,200	75	18,956	923	850	....	2,500	5,262	3,650	335	13,520
Havelock		300	7	267	2,949	148	181	.....	2,216	...	2,495	....	..		.....	.....	.....	.....	.....
Lakefield		1,950		189	3,461	148	200	2,069	15,300	200	18,057	....	..	.....	.....	10,000	.....	100	10,100
Norwood	194		1,107	121	7,566	118	345	5,006	20,250	83	23,802		126	.	10,550	....	.....	.....	10,676
Totals	268	7,525	2,744	699	31,862	1,033	3,738	5,015	52,166	358	63,310	923	976	.....	13,050	15,262	3,650	435	34,296
HASTINGS:																			
Madoc	310	587	899	366	5,342	275	3,321	720	18,700	.....	23,016	794	700	.....	14,853	1,161	..	15,769	22,277
Stirling	180	269	504	5	4,003	...	1,546	260	12,300	5	13,771	654	..	....	1,500	...	416	70	6,040
Tweed	..	400	285	8	4,040	75	2,227	5,060	4,900	.....	12,200	513	1,098	.....	.....	5,000	106	550	7,261
Totals	810	1,256	1,486	379	13,385	350	7,012	5,720	35,900	5	48,987	1,961	1,798	.....	18,753	6,161	516	6,389	35,578
MUSKOKA																			
Huntsville	87	208	355	1,109	7,651	1,119	1,359	1,060	6,063	2,676	15,153	.....	1,909	....	5,225	.....	5,317	....	12,438
PAREY SOUND																			
Burk's Falls	..	1,709	166	44	3,719	369	79	193	797	15	1,453	....	810	....	.....	2,000	.. ....	37	2,847
Sundridge			50	25	942	13	1,190	...	1,221		2,424	.	831	.....	.....	....	644	68	1,543
Totals	..	1,709	216	69	4,661	382	1,269	193	2,018	15	3,877	...	1,641	.....	.....	2,000	644	105	4,390

* As per letter from Manager Union Bank, May 21st, 1896. † Including $5,758, share of township railway debentures to be paid by village.
‡ Including $1,042 paid sufferers from loss by fire.

FINANCIAL STATEMENT—CITY MUNICIPALITIES.

TABLE X. Showing an abstract statement of Receipts, Disbursements, Assets and Liabilities of the cities of Ontario for the year ending December 31st, 1894.

Schedule.	Belleville.	Brantford.	Chatham.	Guelph.	Hamilton.	Kingston.	London.	Ottawa.	St. Catharines.	St. Thomas.	Stratford.	Toronto.	Windsor.
RECEIPTS.	$	$	$	$	$	$	$	$	$	$	$	$	$
Balance from previous year	160	97	29,046	895	4,762	4,949	17,429	.....	1,821	19,271	1,296	312,823	2,717
Municipal and school taxes	86,105	123,082	73,127	82,488	495,740	134,456	330,254	373,492	96,280	103,379	78,752	3,000,508	137,755
Liquor licenses	3,695	3,168	4,330	2,832	11,623	8,297	2,928	16,250	2,035	3,411	1,897	34,245	4,484
Other licenses	1,090	1,038	557	828	4,202	1,770	3,391	3,012	957	941	673	23,314	596
Fees, rents, tolls, fines, etc	3,844	3,578	1,791	4,068	41,852	6,381	9,550	19,073	5,203	2,052	1,845	a272,214	3,660
Water rates, electric light rates, etc	.....	26,159	36	12,458	156,006	35,366	63,948	186,282	13,435	12,988	....	449,450	30,121
Interest on investments and dividends	2,001	6,434	3,007	9,653	7,525	4,053	10,179	56,608	3,567	2,650	1,402	130,646	6,714
From Government (except for loans and schools)	.....	.....	.....	924	7,760	.....	95	.....	.....	.....	.....	7,406	.....
Refund of moneys loaned or invested	.....	28,145	.....	10,531	7,810	.....	218,426	148,505	12,217	95	13,986	54,666	18,302
Money borrowed for current expenses	9,686	.....	32,000	191,000	69,378	108,276	510,000	146,314	238,700	214,900	105,600	499,302	149,925
Money borrowed on debentures	75,000	283,848	10,018	.....	2,564,419	54,980	162,211	101,282	.....	13,538	15,599	1,168,557	31,000
Miscellaneous	457	5,888	1,568	1,154	9,066	3,383	c21,238	8,784	.....	292	1,902	130,972	3,280
Totals	182,038	481,427	155,480	316,831	3,320,128	361,911	1,349,649	1,059,602	374,215	373,517	222,352	6,083,503	388,554
DISBURSEMENTS.													
Election of members of council	209	546	144	189	1,062	389	2,358	702	149	604	161	10,433	537
Allowances, salaries and commissions	4,133	6,595	2,923	4,805	22,933	10,589	16,081	17,830	5,061	4,075	2,470	51,310	4,500
Printing, advertising, postage, stationery	671	827	864	1,202	2,416	1,449	5,496	4,444	786	716	647	12,295	530
Insurance, heating, light and care of buildings	1,347	2,113	1,291	2,603	3,716	2,265	3,222	4,913	1,284	677	3,513	23,175	614
Law costs (including salaries)	.....	588	335	243	3,000	676	2,532	2,453	1,099	585	205	d55,027	2,637
Lighting of streets	6,704	6,437	3,767	11,353	35,071	7,928	21,506	25,876	7,510	5,063	3,578	137,794	6,039
Water supply and fire protection	15,926	26,116	11,289	8,399	83,931	27,507	27,364	86,862	11,768	17,831	5,922	e403,490	24,316
Other expenses of municipal government	11,271	2,115	29	.....	12,714	1,951	4,524	6,112	....	2,189	349	22,643	794
Streets, bridges and parks	8,742	22,024	14,292	24,001	97,885	39,532	36,380	110,858	6,038	16,203	12,423	789,428	22,831
Waterworks, sewers and electric light plant	2,832	9,908	10	1,000	58,067	17,543	45,734	20,028	.....	34,804	6,059	168,519	40,009
Buildings and other property	.....	5,500	15	.....	29,338	.....	6,607	.....	.....	.....	.....	397,737	.....
Board of Health (including salaries)	25	400	1,259	444	12,870	649	1,900	26,336	581	631	1,028	30,142	2,245
Support of the poor and other charities	1,541	4,974	2,370	1,748	26,184	1,647	13,743	1,135	1,478	2,694	2,348	77,458	3,277
Administration of justice, police service	9,754	9,969	5,801	7,765	58,007	14,513	35,620	39,489	5,278	5,037	4,568	313,004	7,223
Payments on account of schools and education	16,580	28,077	20,251	24,523	147,954	36,321	83,580	89,857	20,931	22,100	19,720	490,754	44,041
Sinking fund investments and deposits	2,383	24,510	.....	14,128	9,047	3,202	86,825	243,204	9,519	3,308	16,964	463,455	37,017

Other investments and special deposits	...	3,600	...	...	863	...	...	...	132,051	...	...	...	...	...
Debentures redeemed { Principal	72,000	20,000	7,000	6,700	2,815,300	15,856	134,866	11,065	10,093	18,042	6,150	541,322	19,494	
Debentures redeemed { Interest	22,881	30,258	18,897	20,170	147,245	9,744	118,304	191,962	37,387	23,311	17,244	871,884	46,525	
Interest or discount on loans, etc.	3,466	3,617	1,856	968	7,564	4,502	6,054	17,769	10,989	3,122	2,528	34,588	3,489	
Discount on debentures sold		12,651	...	...	77,728	...	949	...	...	143	...	16,887	...	
Refund of moneys borrowed for current expenses	...	200,720	30,000	167,000	84,675	89,606	520,000	103,777	229,697	179,400	112,000	814,654	109,926	
Miscellaneous	2,847	1,806	8,578	7,257	18,900	2,502	31,341	754,990	9,050	1,440	2,997	137,369	12,510	
Totals	181,847	477,790	151,589	315,810	3,264,277	338,345	1,357,076	1,059,662	369,018	341,975	220,921	5,864,265	388,554	
Assets														
Cash in treasury (excl. of sinking fund)	196	3,671	23,851	21,021	55,851	23,506	12,613	...	...	5,167	31,542	1,878	219,258	...
Taxes in arrears	44,000	2,436	21,120	98,666	343,972	89,157	48,169	520,000	30,402	7,651	14,597	705,135	33,611	
Sinking fund and other investments in mortgages, debentures, stocks, etc., including special deposits	62,077	39,489	28,243	287,326	159,605	30,980	1,192,217	845,812	259,457	69,276	28,716	3,693,561	177,039	
Land, buildings, etc.	9,000	157,340	105,500	125,700	671,498	223,364	412,069	380,850	104,850	70,226	50,400	9,485,454	44,718	
School property (excluding equipment)	90,000	104,856	82,000	105,000	444,771	...	248,300	238,000	63,941	48,700	91,400	1,840,086	143,000	
Waterworks	...	227,184	...	144,000	1,608,355	295,798	697,726	2,097,360	379,800	150,000	...	4,257,263	250,000	
Other property (cemetery, fire halls, etc.)	14,500	40,144	17,000	14,806	719,406	30,104	14,750	88,250	45,720	16,077	14,000	262,102	36,000	
Miscellaneous	41,000	115,180	3,857	24,810	100,780	23,876	36,008	64,000	343,203	...	9,108	43,254,440	278,693	
Totals	250,673	810,104	299,269	710,782	4,103,682	677,245	2,661,788	4,183,912	912,652	398,372	249,639	23,717,445	963,056	
Liabilities														
Local school rates unpaid	...	2,200	725	...	...	556	...	7,374	214	18,800	2,265	...	...	
Debentures outstanding, principal:														
Aid to railways	125,000	30,000	50,528	173,000	...	159,865	140,000	100,000	159,627	116,516	60,000	1,030,718	...	
Schools	18,000	40,000	10,670	18,512	163,460	59,100	50,000	m143,336	8,000	9,944	30,000	1,488,678	107,205	
Local improvement	...	184,017	16,444	13,905	87,173	65,340	188,978	441,963	33,331	107,658	10,369	9,274,047	406,053	
Municipal works	75,000	258,758	...	...	1,111,000	278,000	325,039	1,399,581	n364,947	151,245	...	8,579,736	153,312	
All other classes	103,000	257,700	221,729	368,928	1,778,059	187,267	1,136,987	p1,589,932	269,570	67,871	260,100	...	219,786	
Loans for current expenses	47,740	...	32,000	36,000	q10,426	r48,196	60,000	382,819	s198,000	52,000	16,000	499,302	t122,787	
Miscellaneous	1,017	2,619	19,353	2,325	10,455	16,157	28,950	19,349	1,819	15,520	2,300	u1,777,67.	...	
Totals	369,757	825,293	351,749	612,378	3,160,551	914,467	2,329,976	4,084,377	915,508	531,484	380,974	22,650,154	989,083	

a Including steam railway revenue, $134,570; rent corporation property, $85,596; rent Bell Telephone Co., $7,883. b Being outstanding orders December 1st, 1894. c Including street watering, $47,063. d Including railway arbitration, $2,201; civic investigation, $6,683; drainage claims, $22,985. e Including street watering, $47,063. f Including $70,000 loans to A. O. & P. Sd. Railway. g For special audit. h Including $81,091 sinking fund as per special audit. i Including $10,750 sinking funds in city account. j Including $30,823 accrued interest on guaranteed bonds of St. C. & W. Railway. k Including $3,119,897 payable by property holders for local improvements by special annual assessments; there are also held, negotiation pending, debentures authorized but not herein included, amounting to $1,224,700, for the following: Queen St. Subway, $120,000; Ashbridge's Bay, $140,000; Don Improvement, $125,000; Garrison Creek Sewer, $60,000; Public Schools, $56,500; Redemption of debentures maturing, $113,000; New City and County Buildings, $600,000. l Including $41,989 old city debentures not previously reported. m $20,000 school debentures outstanding in 1893 were not then reported. n $10,000 was omitted in 1893 from these debentures. o Including $13,931 not previously reported, being deducted by treasurer as part sinking fund. p Overstated in 1893 by $2,335. q Being amount of outstanding orders. r Including hospital trust fund, $1,300; unpaid balances, $7,894; amount due sinking fund, $3,202. s Including $170,000 advanced by bank pending issue of debentures. t Including $16,520 due sinking funds and $64,660 due bank for local improvement advances. u Including $7,000 overdue debentures not presented for payment since 1888, but transferred to general account in 1891, and unexpended balances capital account, $933,577; unexpended balances current account, $218,210; special appropriation balances, $102,692.

FINANCIAL STATEMENT—COUNTY MUNICIPALITIES.

TABLE XII. Showing an abstract statement of Receipts, Disbursements, Assets and Liabilities of the county municipalities of Ontario for the two years ending December 31, 1893 and 1894.

Counties.	Receipts.											
	Balance from previous year.	Rates from local municipalities.	Licenses.	Fees, rents, tolls, fines, etc.	Surplus fees from Registrar.	Interest and dividends.	Received from Government for—			Refund of moneys loaned or invested.	Money borrowed for current expenses.	Money borrowed on debentures.
							Schools.	Administration of justice.	Other purposes except loans.			
Essex:	$	$	$	$	$	$	$	$	$	$	$	$
1894	1,546	42,796	140	241	1,342	52	3,801	6,529	.....	.....	17,000	.....
1893	10,156	28,518	520	220	1,754	73	3,699	4,132	....	.....	16,700	.....
Kent:												
1894	6,310	50,708	385	41	1,100	82	3,793	6,756	22	.....	108.555	.....
1893	6,233	47,750	280	18	1,455	54	3,847	4,202	133	.....	159,000	.....
Elgin:												
1894	8,295	40,624	96	650	189	90	3,180	5,511	.....	.....	89,000	.....
1893	8,685	34,144	132	.....	510	195	3,213	4,193	....	.....	69,000	.....
Norfolk:												
1894	3,558	19,244	58	116	.....	66	2,810	1,817	.....	.....	10,000	.....
1893	8,283	22,070	70	53	.....	145	2,744	1,541	.....	....	8,000	...
Haldimand:												
1894	4,541	16,331	130	102	.....	562	2,260	2,806	.....	20,937	.....	....
1893	2,272	21,690	150	97	.....	607	2,202	2,436	.....	.....	.....	....
Welland:												
1894	191	25,424	136	30	851	17	2,245	2,269	.....	.....	5,654	....
1893	366	18,763	121	137	1,041	.....	2,136	1,329	.....	.....	5,557	....
Lambton:												
1894	130	41,211	135	17	1,636	.....	4,151	3,796	....	.....	9,000	...
1893	8,118	28,737	207	63	2,087	.....	4,034	3,262	.....	.....	9,000	.....
Huron:												
1894	7,184	70,414	849	25	1,213	9,747	5,824	2,987	.....	30,974	*42,042	.....
1893	31,534	50,400	954	96	1,138	8,877	5,742	2,095	.....	15,041	.....	.....
Bruce:												
1894	7,853	37,562	592	222	956	995	4,783	2,617	.....	50,000	.....	.....
1893	12,761	49,118	605	301	983	726	4,938	3,237	.....	32,000	6,000	.....
Grey:												
1894	194	37,110	804	14	214	539	6,553	2,674	.....	.....	.....	20,000
1893	229	34,535	664	39	279	294	6,474	2,587	.....	5,863	.....	.....
Simcoe:												
1894	15,719	57,215	1,068	.....	2,262	.....	7,011	4,391	.....	.....	20,000	.....
1893	23,876	59,284	924	.....	2,246	.....	5,906	4,342	....	7,000	20,000	.....
Middlesex:												
1894	57,817	80,386	312	28	271	4,108	5,713	6,819	.....	800	§21,839	45,000
1893	32,094	85,714	.....	507	189	3,194	5,838	6,893	.....	1,000	.....	.....
Oxford:												
1894	37,358	51,224	620	.....	853	2,375	3,529	3,829	4,000	144,739	19,500	155,000
1893	51,599	61,904	500	.....	890	2,358	3,762	2,175	.....	90,663	58,182	.....
Brant:												
1894	13,862	15,862	105	201	29	....	1,830	3,378	....	.....	.....	.....
1893	13,102	15,934	195	259	46	55	1,801	2,654	....	.....	.....	.....
Perth:												
1894	2,525	40,773	194	77	35	43	3,582	3,178	....	.....	33,000	....
1893	6,038	44,865	318	68	17	69	3,657	2,402	.....	.....	16,500	120,000
Wellington:												
1894	6,537	53,766	492	73	58	259	4,186	3,351	.....	.....	23,000	.....
1893	7,332	59,706	543	138	85	253	4,126	3,705	.....	.....	26,000	.....
Waterloo:												
1894	.....	30,010	320	122	120	180	2,682	3,314	35	.....	45,381	30,000
1893	.....	32,173	360	177	210	.....	2,727	1,834	30	.....	55,185	.....
Dufferin:												
1894	321	18,138	205	306	131	248	2,870	1,098	....	5,672	3,000	.....
1893	1,602	21,300	128	14	98	146	2,229	1,028	.....	.....	6,000	.....
Lincoln:												
1894	1,472	26,586	382	.....	97	87	1,740	2,098	.....	.....	10,000	4,000
1893	3,467	26,193	330	10	116	164	1,732	3,154	....	.....	18,000	.....

*Including $10,042 from Sinking Fund. § Being amount from Sinking Fund

FINANCIAL STATEMENT—COUNTY MUNICIPALITIES.

TABLE XII. Showing an abstract Statement of Receipts, Disbursements Assets and Liabilities of the county municipalities of Ontario for the two years ending December 31, 1893 and 1894.—*Continued.*

Receipts.—*Continued.*				Disbursements.								
				Expenses of municipal government.						Construction.		
Non resident taxes collected	Towns or cities separated from county, for various services.	Miscellaneous.	Total.	Attendance at meetings of council and committees.	Allowances, salaries and commissions.	Printing, advertising, postage and stationery.	Insurance, heating, lighting and care of buildings.	Law costs (including salaries.)	Other expenses.	Roads and bridges.	Grants to local municipalities for roads and bridges	Buildings and other works.
$	$	$	$	$	$	$	$	$	$	$	$	$
9,406	....	1,408	84,261	1,773	2,887	635	364	953	1,275	2,378	400	.....
10,245	.....	1,866	77,883	2,167	4,172	681	1,952	4,107	2,782	3,862		.....
9,659	6,226	1,977	195,817	2,621	1,900	209	80	748	4,435	951	450	.....
11,796	7,116	1,616	243,500	2,220	1,900	193	68	59	2,427	788	....	.....
840	2,950	1,272	152,697	878	2,701	645	417	9,880	.....	15,469	...	1,429
1,644	2,841	546	125,093	1,149	2,430	498	592	751	....	4,858	...	331
1,676	....	165	39,010	815	1,893	674	858	.....	.....	...	...	1,475
1,247	....	235	44,288	715	1,328	646	459	65	.....	...	...	5,969
130	...	.....	47,799	1,130	1,685	508	412	.....	1,592	864		.
661		99	30,214	909	1,685	202	545	.....	772	636	.....	.....
959	1,548	718	39,982	1,534	1,230	240	889	2	800	507	100	.. ....
668	1,442	592	32,550	1,414	1,350	360	1,479	5	... ...	951		.. ....
13,146	...	98	73,320	1,613	1,971	649	781	224	962	11,075	6,829	165
12,140	.. ..	45	67,693	1,635	2,189	659	949	395	608	12,134		....
589	....	230	172,078	2,425	2,679	1,013	850	827	141	8,240	3,000	562
685	..	386	116,948	1,855	2,712	1,094	681	631	107	10,188		2,552
2,976	.....	724	109,280	2,274	2,695	1,082	1,745	99	103	5,354	4,500	.....
3,948	.. ..	1,187	115,804	2,329	2,771	1,295	1,249	158	351	19,936		1,428
3,958	.....	383	72,443	3,128	2,130	495	2,011	82	.....	4,110	14,065	670
3,256	.. ..	250	54,470	3,100	2,130	586	4,782	5	.....	6,184	.....	.....
4,745	.....	1,363	113,774	2,886	3,510	692	1,544	492	...		4,874	472
7,197	....	708	131,483	3,296	3,155	1,354	1,430	120	42	2,432		1,017
2,224	6,752	1,798	233,867	1,766	4,692	370	646	.....	.....	6,103	3,366	253
2,509	6,246	3,031	147,215	1,644	4,131	623	378	150	.	4,664	.....	261
414	....	968	424,909	2,295	2,790	509	1,666	215	184	4,859	3,016	548
627		1,028	275,688	3,339	2,855	728	2,139	230	...	6,566	..	36,006
301	3,259	8	38,835	394	1,380	446	1,955	100	.....	197	4	799
78	3,244	44	37,412	421	2,210	670	1,449	100	... ...	66		938
248	1,633	1,614	86,902	1,044	2,354	187	.....	36	256	2,091	3,316	.....
664	1,528	3,383	199,569	1,358	2,543	280	.....	202	792	9,149	.....	.....
335	3,229	268	95,551	1,792	2,005	458	1,274	25	.....	13,868	3,962	.....
814	2,989	542	106,233	1,861	2,305	318	2,658	.....	.....	15,201	.....	657
211	.....	803	113,178	1,682	2,926	1,036	1,379	93	128	1,420	63	5,167
52	.....	276	93,023	1,840	1,710	1,104	1,531	1,681	326	1,965	....	7,986
3,982	....	133	36,104	579	1,015	229	571	22	589	550		...
1,942	....	150	34,637	994	850	365	574	24	533	1,140	.	51
187	4,478	691	51,818	1,268	1,533	336	2,273	1,116	79	3,633	.....	1,149
614	1,993	2,255	58,028	1,219	1,365	212	1,647	1,636	.....	8,055	...	.....

* The figures for 1895 include grants to local municipalities.

FINANCIAL STATEMENT—COUNTY MUNICIPALITIES.

TABLE XII. Showing abstract statement of Receipts, Disbursements, Assets and Liabilities, etc.

Disbursements.—*Continued.*

Counties.	Support of the poor and other charities.	Administration of justice, gaol maintenance, etc.	Grants to schools and other payments on education.	Sinking funds and other investments, special deposits, etc.	Debentures redeemed.	Interest paid on debentures.	Refund of money borrowed for current expenses.	Interest or discount on loans and advances.	Non-resident taxes to local municipalities.	Miscellaneous.	Total.
Essex :	$	$	$	$	$	$	$		$	$	$
1894	125	17,294	8,021	.....	7,180	638	22,700	711	9,763	3,091	80,138
1893	.....	13,445	10,515	.....	4,163	501	15,000	989	11,360	701	76,337
Kent :											
1894.....	.....	18,028	12,804	.....	21,382	5,939	114,000	912	10,736	642	195,817
1893.....	.....	14,555	9,365	.....	20,330	7,066	162,000	1,929	12,689	1,601	237,190
Elgin :											
1894	4,710	13,831	14,033	.....	.....	.....	75,000	2,242	1,147	156	142,538
1893.....	4,962	13,536	17,914	.....	.....	.....	65,000	1,941	1,993	926	116,798
Norfolk :											
1894...	4,651	6,831	9,801	.....	.....	.....	10,000	222	1,624	729	39,053
1893.....	4,533	6,042	10,804	.....	.....	.....	8,000	134	1,230	915	40,830
Haldimand :											
1894.....	152	7,095	11,289	551	20,000	1,200	.....	206	93	.....	46,487
1893	143	7,034	10,956	598	.....	1,200	.....	224	689	99	25,673
Welland :											
1894.....	5,965	9,669	8,995	.....	1,450	493	5,957	381	959	664	39,835
1893.....	4,964	8,567	8,442	.....	1,381	562	1,273	365	666	580	32,359
Lambton											
1894.....	24	11,485	13,199	.....	.....	.....	9,000	146	13,146	1,244	72,518
1893.....	54	10,855	15,351	.....	.....	.....	9,000	199	12,140	1,395	67,563
Huron :											
1894.....	5,926	10,420	20,030	48,142	20,000	17,049	26,060	492	710	958	169,743
1893.....	2,791	10,069	17,416	40,950	.....	17,001	.....	.....	708	1,009	109,764
Bruce :											
1894.....	136	12,024	15,550	51,000	.....	1,230	.....	.....	2,976	2,082	102,840
1893	327	10,250	16,298	38,000	.....	1,260	6,000	68	3,951	2,260	107,951
Grey :											
1894.....	10	12,767	19,146	7,167	.....	700	.....	.....	4,067	1,826	72,379
1893.....	.....	11,698	19,444	.....	.....	300	.....	.....	3,498	2,549	54,276
Simcoe :											
1894.....	615	15,805	24,062	.....	13,700	4,503	20,000	1,052	4,482	1,189	99,879
1893.....	499	13,833	22,875	.....	27,300	6,123	15,000	932	7,610	8,366	115,764
Middlesex :											
1894.....	10,615	25,043	19,924	21,839	45,000	28,580	.....	.....	2,296	1,432	171,925
1893.....	8,588	21,549	20,088	.....	.....	24,385	.....	.....	2,035	902	89,398
Oxford :											
1894.....	3,165	10,748	11,410	.....	150,305	14,744	199,739	258	264	10,924	417,620
1893.....	.....	10,225	10,108	18,182	65,900	12,573	55,263	589	640	10,987	236,330
Brant :											
1894.....	635	9,739	6,619	.....	1,269	708	.....	.....	301	1,584	25,940
1893.....	588	7,653	5,901	.....	1,255	792	.....	.....	78	1,429	23,550
Perth :											
1894.....	330	12,036	11,062	.....	2,000	7,110	41,200	652	399	522	84,595
1893	600	9,118	12,792	.....	138,000	17,248	3,500	183	689	520	196,984
Wellington :											
1894.....	6,748	12,289	16,237	.....	.....	600	26,000	531	469	1,463	87,721
1893.....	7,625	13,154	16,322	.....	11,100	1,266	23,000	349	826	3,054	99,696
Waterloo :											
1894.....	10,248	6,686	14,543	.....	9,672	1,070	50,185	1,274	211	1,373	113,178
1893	6,314	7,538	13,860	.....	1,300	579	44,334	1,235	52	568	93,023
Dufferin :											
1894	.....	5,937	8,522	6,081	1,900	1,656	3,000	61	4,119	104	34,885
1893	.....	6,159	8,389	1,345	1,800	2,486	6,000	148	3,221	237	34,316
Lincoln :											
1894.....	3,154	8,515	10,065	.....	1,000	859	11,000	802	70	985	47,740
1893	5,238	9,105	7,211	.....	2,363	1,110	13,900	713	1,257	1,525	56,556

FINANCIAL STATEMENT—COUNTY MUNICIPALITIES.

TABLE XII. Showing an abstract statement of Receipts, Disbursements, Assets and Liabilities, etc.

Assets.						Liabilities.						
Cash in treasury.	Rates due from local municipalities.	Sinking fund and other investments in stocks, mortgages, debentures, etc., special deposits, etc	Land, buildings, furniture, etc.	Miscellaneous.	Total.	School grants unpaid.	Railway debentures outstanding (principal).	All other debentures outstanding (principal).	Loans for current expenses and interest due on same.	Local municipalities for non resident taxes collected.	Miscellaneous.	Total.
$	$	$	$	$	$	$	$	$	$	$	$	$
4,123	18,120	.....	63,000	24,666	109,909	.....	.....	5,800	17,000	11	.....	22,811
1,546	29,111	.....	63,000	34,055	127,712	.....	.....	12,980	22,700	389	.....	36,049
.....	37,321	.....	*169,432	8,558	215,311	.....	40,411	62,494	36,575	43,261	1,317	144,038
6,310	35,741	.....	169,432	23,919	235,402	.....	52,505	71,782	42,000	378	1,289	167,954
10,159	34,144	.....	123,466	.....	167,769	800	.....	.....	57,000	44	.....	57,844
8,295	27,409	.....	123,466	.....	159,170	255	.....	.....	43,000	351	.....	43,606
457	6,770	.....	50,000	1,006	58,233	.....	.....	.....	.....	227	1,281	1,508
3,558	4,116	.....	56,000	.....	63,674	.....	.....	.....	.....	176	.....	176
1,312	3,071	.....	25,000	.....	29,383	.....	.....	.....	.....	52	.....	52
4,541	.....	20,386	25,000	.....	49,927	.....	.....	20,000	.....	15	.....	20,015
147	9,090	.....	107,861	125	117,223	.....	.....	8,412	5,654	.....	.....	14,066
191	10,464	.....	107,861	215	118,731	.....	.....	9,862	5,957	.....	.....	15,819
802	21,151	.....	30,000	1,179	53,132	.....	.....	.....	.....	.....	.....	.....
130	21,685	.....	30,000	2,911	54,726	.....	.....	.....	.....	.....	.....	.....
2,335	40,367	179,538	52,000	.....	274,240	3,281	.....	262,800	16,042	336	16	282,475
7,184	48,908	162,370	52,000	.....	270,462	3,847	.....	282,800	.....	457	12	287,116
6,440	7,898	32,000	54,300	3,471	104,109	105	.....	20,000	.....	.....	5,993	26,098
7,853	6,268	31,000	54,300	1,944	101,365	.....	.....	20,000	.....	.....	5,306	25,306
64	9,103	20,477	87,639	.....	117,283	5	.....	26,000	.....	1,244	28	27,277
194	10,034	13,510	78,639	.....	102,177	.....	.....	6,000	.....	1,353	37	7,390
13,895	28,536	18,600	†150,000	4,269	215,300	.....	68,200	.....	20,000	507	3,282	91,989
15,719	29,472	19,200	150,000	4,600	218,991	.....	81,900	.....	20,000	245	.....	102,145
61,942	74,735	a29,629	100,170	13,625	280,111	296	.....	522,900	21,839	976	14,569	560,580
57,817	83,273	8,600	100,000	19,947	269,637	5,772	.....	522,900	.....	1,049	17,024	546,745
7,289	16,765	.....	190,000	1,017	215,071	4,534	149,795	.....	4,500	436	3,599	162,864
37,358	22,085	144,739	176,000	1,545	381,727	4,062	145,100	.....	184,739	285	11,906	346,092
12,895	.....	.....	100,000	.....	112,895	.....	.....	12,801	.....	.....	.....	12,801
13,862	.....	.....	105,000	.....	118,862	.....	.....	14,170	.....	.....	.....	14,170
2,307	22,841	.....	105,000	843	130,991	1,861	120,000	90,000	4,800	83	2,029	218,773
2,525	20,929	.....	105,000	905	128,459	1,205	120,000	92,000	13,000	235	1,345	227,785
7,833	37,088	.....	80,000	3,750	128,671	1,543	.....	10,000	23,000	575	3,264	38,382
6,537	33,950	.....	80,000	9,103	129,590	1,479	.....	10,000	26,000	708	4,069	42,056
.....	8,716	4,351	85,000	1,017	99,084	2,600	.....	29,328	12,381	.....	.....	44,309
.....	7,854	4,351	82,500	1,014	95,719	3,500	9,000	.....	18,185	.....	.....	30,685
1,219	6,836	6,544	40,000	293	54,892	953	.....	25,700	.....	653	1,623	28,929
321	7,067	6,135	40,373	563	54,459	780	.....	27,600	.....	790	1,638	30,808
4,078	17,598	.....	96,500	.....	118,176	2,930	.....	20,182	10,500	192	130	33,934
1,472	15,693	.....	95,000	.....	112,165	4,138	.....	17,182	11,460	74	144	33,038

* Including $93,906 for bridges.
† Including bridges $23,000.
‡ $3,961 due in 1893 was not then reported.
a Including $21,839 in general account.

FINANCIAL STATEMENT—COUNTY MUNICIPALITIES.—*Continued.*

Counties.	Receipts.											
	Balance from previous year.	Rates from local municipalities.	Licenses.	Fees, rents, tolls, fines, etc.	Surplus fees from Registrar.	Interest and dividends.	Received from Government for—			Refund of moneys loaned or invested.	Money borrowed for current expenses.	Money borrowed on debentures.
							Schools.	Administration of justice.	Other purposes except loans.			
Wentworth :	$	$	$	$	$	$	$	$	$	$	$	$
1894	23,580	13,970	216	3,125	597	281	2,822	5,811	.....	.....	.....	.....
1893	20,704	20,679	225	2,915	725	286	2,832	5,308	.....	.....	.....	.....
Halton :												
1894	11,284	11,587	166	.....	54	1,379	1,701	2,426	.....	77,054	.....	.....
1893	14,455	9,141	143	39	.....	2,279	1,640	1,427	.....	.....	.....	.....
Peel :												
1894	4,504	18,206	210	49	.....	15	2,191	2,629	.....	.....	13,000	.....
1893	5,403	24,098	260	.....	.....	23	2,188	1,222	.....	.....	10,000	.....
York :												
1894	405	55,114	762	14,747	79	.....	5,193	22,906	.....	.....	24,584	.....
1893	14,157	44,225	735	19,941	1,078	.....	5,118	21,319	30	.....	.....	.....
Ontario :												
1894	12,478	28,574	271	156	139	.....	3,862	3,978	.....	.....	48,000	20,000
1893	16,551	21,446	355	63	157	.....	3,981	2,209	.....	.....	54,000	.....
Durham and Northumberland :												
1894	1,316	33,060	840	23	.....	7	5,792	3,550	.....	.....	48,900	.....
1893	8,790	38,397	789	20	.....	.....	5,883	3,347	.....	.....	13,000	.....
Prince Edward :												
1894	2,859	14,799	125	54	.....	41	1,632	1,823	.....	.....	756	.....
1893	5,566	17,559	81	26	.....	15	1,699	1,929	.....	.....	.....	.....
Lennox and Addington :												
1894	.....	34,537	378	122	.....	8	3,097	1,661	4	.....	9,319	27,600
1893	2,054	32,664	248	247	.....	.....	3,144	976	.....	.....	3,680	.....
Frontenac :												
1894	5,138	33,166	225	3,456	.....	120	3,894	1,781	.....	.....	.....	.....
1893	11,421	26,724	181	3,324	.....	71	3,723	670	.....	.....	5,000	.....
Leeds and Grenville :												
1894	.....	26,258	270	20	.....	284	4,336	4,156	.....	.....	16,948	.....
1893	.....	30,265	630	34	.....	316	4,594	2,242	.....	.....	12,834	.....
Stormont, Dundas&Glengarry :												
1894	1,124	37,534	416	82	.....	153	5,856	2,700	.....	.....	11,500	.....
1893	10,042	33,236	682	96	.....	1,060	5,760	3,403	.....	.....	5,000	823
Prescott and Russell :												
1894	3,726	14,426	285	46	.....	98	2,450	1,316	.....	.....	13,347	.....
1893	1,968	14,490	480	.....	.....	.....	2,162	2,303	.....	.....	1,921	.....
Carleton :												
1894	1,496	27,608	170	150	220	1,026	3,167	4,894	.....	.....	†5,000	.....
1893	1,845	26,471	102	.....	191	897	3,174	4,382	.....	29,000	.....	20,000
Renfrew :												
1894	5,949	21,678	433	86	146	148	5,513	4,036	200	.....	3,000	.....
1339	....	17,865	550	55	73	121	5,734	3,189	.....	.....	15,000	17,500
Lanark :												
1894	4,433	18,183	225	3	.....	26	3,226	1,348	.....	.....	7,000	.....
1893	4,513	17,509	395	.....	.....	10	3,224	1,357	.....	.....	7,000	.....
Victoria :												
1894	3,726	29,971	457	246	121	4,564	4 220	2,371	.....	30,164	16,500	.....
1893	307	27,651	478	281	125	4,465	3,610	2,545	.....	21,800	34,000	.....
Peterborough :												
1894	5,065	24,759	285	213	266	215	2,973	2,388	.....	1,074	11,872	.....
1893	697	21,387	410	137	286	167	2,823	2,582	16	71	11,515	.....
Haliburton :												
1894	162	7,333	20	.....	42	.....	3,135	56	.....	.....	10,000	.....
1893	509	8,915	23	51	.....	.....	3,046	131	.....	.....	11,800	.....
Hastings :												
1894	256	51,913	320	123	330	4,748	4,577	2,880	.....	19,939	56,104	.....
1893	458	56,119	245	113	586	4,295	4,572	4,539	.....	14,174	39,676	.....

†From sinking fund.

FINANCIAL STATEMENT—COUNTY MUNICIPALITIES.—*Continued.*

Receipts.—*Con.*				Disbursements.								
				Expenses of municipal government.						Construction.		
Non-resident taxes collected.	Towns or cities separated from county, for various services.	Miscellaneous.	Total.	Attendance at meetings of council and committees.	Allowances, salaries and commissions.	Printing, advertising, postage and stationery.	Insurance, heating, lighting and care of buildings.	Law costs (including salaries).	Other expenses.	Roads and bridges.	Grants to local municipalities for roads and bridges.	Buildings and other works.
$	$	$	$	$	$	$	$	$	$	$	$	$
209	†22,362	289	73,262	1,961	2,500	435	....	....	....	1,665	2,158	.....
289	16,643	11	70,627	1,378	2,500	542	....	.....	.....	2,542	....	.....
64	.....	.....	105,715	605	1,131	592	483	6,491	378	5,161	....	.....
149	.....	84,623	113,896	737	1,131	645	736	3,374	770	180	....	.....
86	....	111	41,001	719	1,634	710	627	....	....	4,524	.....	460
39	.....	270	43,508	752	2,589	595	450	....	2,216	2,268	....	547
13,533	25,518	5,097	167,938	5,452	3,443	1,881	2,591	2,937	733	37,040	850	2,659
10,172	27,274	368	144,417	4,099	3,497	240	1,861	700	2,028	38,243	....	3,931
706	.....	1,026	119,190	2,673	2,303	604	709	27	....	525	....	.....
1,306	....	180	100,248	1,476	2,256	832	2,283	58	.....	612	....	....
1,361	1,125	*10,975	106,949	5,928	1,706	845	1,182	752	2,083	12,297	816	....
888	2,278	135	73,527	6,930	1,725	927	1,203	874	1,485	9,310	....	20
55	....	29	22,173	483	750	400	411	....	327	134	.....	.....
128	....	15	27,918	442	750	425	715	....	960	724	....	.....
18	....	6,240	82,984	1,111	1,116	936	356	50	232	107	338	498
83	....	....	42,496	980	1,078	693	824	387	241	1,774	....	1,006
1,423	4,558	1,619	55,380	897	1,414	371	147	.....	....	2,205	650	.....
1,772	4,572	714	58,172	920	1,784	299	988	.....		2,462	....	.....
483	3,600	577	56,982	2,146	2,400	859	1,727	....	14	....	752	4,465
285	.....	120	51,320	2,068	3,813	702	1,194	.....	.....	99	....	.....
2,004	....	....	61,369	1,696	1,810	528	1,569	2,688	768	136	....	.....
617	..	56	60,774	1,713	1,832	550	1,066	1,328	352	87	....	844
4,826	....	616	41,136	913	788	873	510	.....	....	2,611	159	....
5,685	....	1,048	35,037	808	1,062	518	514	....	....	726	....	.....
1,399	9,750	1,702	56,582	2,855	2,150	587	567	225	116	2,010	100	5,817
1,603	9,750	1,976	99,391	2,699	2,100	826	....	240	....	13,391	....	4,256
778	....	668	42,143	1,413	1,390	264	1,090	8	228	1,439	2,000	3,493
945	....	580	61,612	1,593	1,200	560	665	24	39	2,488	....	599
516	....	70	35,697	1,268	1,465	625	996	....	....	....	....	....
963	....	448	35,280	1,201	2,873	522	773	....	....	....	....	....
2,940	....	687	94,985	1,558	2,202	800	938	67	1,048	1,231	....	129
2,641	600	1,068	99,571	1,478	2,250	800	840	126	24	2,600	....	677
1,471	19	3,034	54,254	1,356	1,780	520	1,083	168	....	2,788	1,302	47
1,255	2,925	1,184	44,554	1,301	1,688	771	1,380	134	....	6,772	....	689
613	....	130	21,447	110	600	200	57	....	....	31	.. .	....
1,011	....	4	25,490	132	600	142	177	....	....	295	....	171
1,925	5,668	379	149,872	2,971	3,885	818	2,610	....	....	29,888	6,049	....
4,400	5,616	712	145,305	3,287	3,210	959	3,036	....	312	25,011	....	1,441

*Including $8,500 from Dominion and $2,304 from Seymour Narrows bridge.
†$13,020 from Hamilton on court house capital account. ‡For special services by Registrar of Deeds.

FINANCIAL STATEMENT—COUNTY MUNICIPALITIES.—*Continued.*

Counties.		Disbursements.—*Continued.*										
		Support of the poor and other charities.	Administration of justice, gaol maintenance, etc.	Grants to schools and other payments or education.	Sinking funds and other investments, special deposits, etc.	Debentures redeemed.	Interest paid on debentures.	Refund of money borrowed for current expenses.	Interest or discount on loans and advances.	Non-resident taxes to local municipalities.	Miscellaneous.	Total.
		$	$	$	$	$	$	$	$	$	$	$
Wentworth :	1894	750	19,532	8,085	....	6,000	1,860	....	.....	209	2,042	47,197
	1893	760	19,161	9,814	.....	6,000	2,220	.....	.....	321	1,809	47,047
Halton :	1894	.....	6,548	5,854	...	3,500	105	.....	.....	131	*63,036	94,015
	1893	.....	5,886	6,789	77,054	5,000	360	.....	.....	150	.....	102,612
Peel :	1894	35	8,661	7,978	.....	1,500	90	12,000	330	104	810	40 182
	1893	33	6,120	7,337	.....	4,500	225	10,000	279	81	1,012	39,004
York :	1894	6,805	60,303	16,858	.....	6,571	1,093	.....	2,198	15,852	672	167,938
	1893	6,575	51,653	16,269	.....	5,581	1,070	.....	.....	8,192	73	144,012
Ontario :	1894	128	8,228	14,529	.....	20,000	610	48,000	560	1,312	746	101.044
	1893	.....	9,237	14,261	.....	.....	1,200	53,000	645	913	1,002	87,770
Durham and Northumberland :	1894	.....	14,729	21,079	.....	.....	.....	38,500	658	1,361	.....	101,936
	1893	.....	11,404	19,617	.....	.....	.....	17,000	441	888	797	72,211
Prince Edward :	1894	148	5,213	5,831	.....	6,335	1,940	.....	146	55	.....	22,173
	1893	159	4,974	6,082	.....	6,203	2,312	.....	285	128	.....	24,159
Lennox & Addington :	1894	116	6,968	10,375	13,825	24,100	7,320	12,998	372	17	60	80,895
	1893	.....	7,960	12,757	.....	7,300	7,010	.....	406	80	.....	42,496
Frontenac :	1894	625	9,138	9,160	.....	8,500	11,745	.....	1,200	1,044	2,151	49,247
	1893	700	9,055	10,135	.....	9,200	12,090	.....	1,080	1,905	2,416	53,034
Leeds and Grenville :	1894	1,530	9,589	15,701	2,884	.....	625	12,834	366	526	514	56,932
	1893	1,178	12,168	16,680	6,768	.....	1,875	3,853	427	10	545	51,320
Stormont, Dundas and Glengarry :	1894	.....	9,265	24,080	.....	5,543	2,105	3,000	496	1,980	1,523	57.187
	1893	99	9,292	23,328	.....	6,196	2,269	9,000	200	617	727	59,650
Prescott and Russell :	1894	.....	6,936	9,210	.....	.....	.....	10,414	643	5,003	740	38,300
	1893	.....	6,499	9,444	.....	.....	.....	.....	510	5,009	1,131	26,311
Carleton :	1894	1,926	14,438	7,969	10,000	.....	3,400	.....	.....	1,399	1,775	54,834
	1893	2,591	14,348	7,781	25,000	20,000	3,600	.....	.....	1,603	.....	97,895
Renfrew :	1894	200	9,058	13,176	584	1,591	2,249	...	28	870	262	39,343
	1893	200	8,105	14,084	573	974	1,520	22,271	365	95	538	55,663
Lanark :	1894	695	7,073	9,748	.....	.....	.....	7,000	122	516	2,735	32,171
	1893	476	5,773	10,120	.....	.....	.....	7,000	121	963	1,132	30,956
Victoria :	1894	312	10,561	13,183	35,214	.....	5,100	16,225	1,237	2,557	1,520	94,031
	1893	403	9,656	12,138	29,100	.....	5,100	25,170	1,425	2,444	1,434	95,845
Peterborough :	1894	51	10,401	6,858	4,372	772	2,558	9,500	351	1,277	1,044	53,415
	1893	.....	9,516	6,909	1,348	735	1,995	5,166	336	1,307	454	39,489
Haliburton :	1894	.....	251	4,439	.....	3,524	489	10,500	181	613	106	21,207
	1893	25	834	4,201	.....	4,027	1,014	12,500	181	1,011	12	25,328
Hastings :	1894	18	12,580	15,819	27,771	.....	5,400	36,355	3,491	1,925	664	149,179
	1893	.....	14,347	16,143	21,609	.....	5,400	33,861	1,740	4,771	132	135,249

*Amount of G. T. R. judgment money distributed among local municipalities.

FINANCIAL STATEMENT—COUNTY MUNICIPALITIES.—*Continued.*

Assets.						Liabilities.						
Cash in treasury.	Rates due for local municipalities.	Sinking fund and other investments in stocks, mortgages, debentures, etc., special deposits, etc	Land, buildings, furniture, etc.	Miscellaneous.	Total.	School grants unpaid.	Railway debentures outstanding (principal.)	All other debentures outstanding (principal.)	Loans for current expenses and interest due on same.	Local municipalities for non-resident taxes collected.	Miscellaneous.	Total.
$	$	$	$	$	$	$	$	$	$	$	$	$
26,067	3,361	.....	170,000	20,435	219,861	218	.....	29,000	.....	.....	4,775	33,993
23,580	1,550	.....	180,000	31,895	237,025	226	.....	35,000	.....	.....	3,736	38,962
11,700	3,289	.....	50,000	300	65,289	.....	.....	.....	.....	83	.....	83
11,284	2,868	77,054	50,300	.....	141,506	.....	3,500	.....	.....	149	105	3,754
819	.....	.....	56,786	.....	57,605	1,522	.....	.....	1,000	7	.....	2,529
4,504	.....	.....	56,725	.....	61,229	.....	1,500	.....	.....	24	.....	1,524
.....	4,505	.....	100,000	47,550	152,055	890	.....	13,482	24,584	4,707	14,415	58,078
405	5,924	.....	100,000	40,926	147,255	795	3,650	16,403	.....	7,026	11,818	39,692
18,146	5,537	.....	50,000	.....	73,683	904	.....	20,000	18,000	200	1,038	40,142
12,478	8,016	.....	50,000	.....	70,494	1,167	.....	20,000	18,000	805	48	40,010
5,013	12,904	.....	52,500	.....	70,417	.....	.....	.....	12,400	.....	.....	12,400
1,316	8,907	.....	52,600	3,334	66,157	.....	.....	.....	2,000	.....	.....	2,000
.....	7,764	.....	33,500	.....	41,264	1,632	28,000	.....	756	.....	.....	30,388
2,859	4,568	.....	33,500	.....	40,927	1,694	32,000	2,335	.....	.....	.....	36,029
2,089	16,822	13,825	55,000	.....	87,736	1,395	.....	120,300	.....	86	13	121,794
.....	16,349	.....	55,000	.....	71,349	1,784	.....	116,800	3,680	85	448	122,797
6,133	27,010	2,000	125,000	10,049	170,192	2,974	*163,800	20,000	20,000	1,355	786	208,915
5,138	25,534	2,000	125,000	9,999	167,671	2,528	160,800	31,500	20,000	976	923	216,727
.....	23,034	9,652	110,000	.....	142,686	.....	.....	25,000	16,948	234	816	42,998
.....	21,003	6,768	110,000	.....	137,771	.....	.....	25,000	12,834	277	645	38,756
4,182	10,452	.....	61,000	37,170	112,804	.....	.....	‡41,842	17,000	24	2,203	61,069
1,124	5,424	.....	61,000	38,341	105,889	.....	.....	45,511	8,500	.....	2,773	56,784
2,836	9,560	.....	20,000	.....	32,396	.....	.....	.....	13,347	1,707	.....	15 054
3,726	9,708	.....	20,000	.....	33,434	.....	.....	.....	10,414	1,884	.....	12,298
1,748	25,679	26,000	190,000	2,776	246,203	.....	.....	55,000	5,000	.....	1,200	61,200
1,496	25,555	16,000	190,000	2,468	235,519	.....	.....	55,000	.....	.....	2,200	57,200
3,137	17,182	2,835	50,000	1,432	74,586	.....	.....	42,764	3,000	744	758	47,266
5,949	14,095	2 251	50,000	1,618	73,913	.....	.....	44,355	.....	891	443	45,689
2,859	2,191	.....	53,000	.....	58,050	.....	.....	.....	.....	.....	.....	.....
4,443	.....	.....	53,000	.....	57,433	.....	.....	.....	.....	.....	.....	.....
954	19,447	76,585	66,755	4,155	167,896	2,930	85,000	.....	25,000	314	70	113,314
3,726	16,287	71,535	66,400	1,600	159,548	3,430	85,000	.....	24,725	814	13	113,982
818	15,072	14,536	93,355	4,145	127,926	2,758	.....	45,893	†22,288	460	4,546	75,945
5,085	17,974	11,238	93,355	2,167	129,799	2,832	.....	46,685	19,916	267	5,753	75,433
284	10,384	.....	.....	.....	10,668	473	5,268	.....	2,300	.....	1,100	9,141
162	9,888	.....	1,650	19	11,719	475	8,792	.....	2,800	.....	880	12,947
123	54,617	83,634	60,000	.....	198,374	1,350	80,000	10,000	§48,780	.....	348	140,478
256	47,362	75,802	60,000	.....	183,420	290	80,000	10,000	29,032	34	323	119,679

*Including $3,000 previously classed with "all other objects." ‡Including $1,874 omitted in 1893.
†Including $11,788 due sinking fund. §Including $41,000 due sinking fund.

FINANCIAL STATEMENT.—TOWNSHIP MUNICIPALITIES.

TABLE XIII. Summary statement showing the totals for all Townships in Ontario of the several items of Receipts, Disbursements, Assets and Liabilities for the nine years ending December 31st, 1886 94.

Schedule.	1894.	1893.	1892.	1891.	1890.	1889.	1888.	1887.	1886.
RECEIPTS.	$	$	$	$	$	$	$	$	$
Balance from previous year	476,233	539,298	501,217	474,360	441,354	462,869	409,958	431,383	385,132
Ordinary municipal revenue :									
Municipal and school taxes	4,573,620	4,463,043	4,709,576	4,440,478	4,563,863	4,315,642	4,355,165	4,415,224	4,383,179
Licenses, fees, rents, fines, etc	62,684	64,577	70,664	72,337	73,942	69,326	49,466	45,243	47,675
Refund of moneys loaned or invested, including special deposits and interest	291,747	226,983	234,690	517,726	268,828	364,901	296,769	218,495	294,321
Loans :									
Money borrowed for current expenses	591,014	457,466	419,335	580,354	477,099	403,857	329,684	365,724	335,806
Money borrowed on debentures for—									
Schools	54,324	57,397	94,707	47,160	403,828	330,080	353,986	292,302	278,193
Other purposes	285,460	252,148	300,999	332,504					
Miscellaneous	204,930	127,958	129,494	191,711	130,281	145,092	148,489	151,802	235,256
Totals	6,539,412	6,188,870	6,460,682	6,656,630	6,359,195	6,091,767	5,943,517	5,920,173	5,869,562
DISBURSEMENTS.									
Expenses of municipal government :									
Allowances, salaries and commissions	285,560	285,188	287,882	281,802	274,430	271,649	257,691	265,436	264,119
Other expenses of municipal government	138,693	128,700	137,748	119,487	127,872	121,901	96,631	104,596	101,286
Construction works :									
Roads and bridges	796,775	806,781	743,651	755,323	779,028	685,371	624,458	734,178	719,215
Buildings and other works	7,393	11,836	17,201	23,515					
Drainage works	297,286	275,941	237,215	275,551	234,799	192,161	171,844	273,756	251,215
Support of the poor and other charities	65,621	62,332	66,849	68,421	67,469	64,224	66,612	64,473	64,916
County treasurer for levy	1,086,752	1,098,967	1,204,116	1,145,037	1,166,283	1,106,129	1,156,979	1,105,373	1,088,648
Payments on account of schools and education	1,831,241	1,820,007	1,904,746	1,782,303	1,884,569	1,857,349	1,824,798	1,882,831	1,872,844
Sinking funds and other investments	285,334	149,768	165,841	194,072	211,228	220,844	191,169	175,247	180,960

Loans repaid									
Debentures redeemed (principal)	433,996	355,363	365,012	641,382	325,884	443,419	266,965	264,878	252,329
Interest on loans, advances and debentures	180,027	177,693	187,720	200,504	198,674	194,710	203,698	164,273	152,506
Refund of moneys borrowed for current expenses	524,212	407,663	460,546	508,356	484,326	353,262	331,578	345,697	333,006
Miscellaneous	128,091	132,398	142,857	159,661	130,323	139,394	188,225	135,965	154,692
Totals	6,060,981	5,712,637	5,921,384	6,155,413	5,884,835	5,650,413	5,480,648	5,516,643	5,435,736
ASSETS.									
Cash in treasury	478,431	476,233	539,298	501,217	474,360	441,354	462,869	403,530	433,826
Taxes in arrears	1,596,099	1,572,817	1,373,503	1,511,872	1,339,039	1,434,687	1,258,346	1,146,827	1,171,743
Sinking Funds and other investments in stocks, mortgages, debentures, etc., including special deposits	1,442,922	1,371,296	1,396,451	1,373,830	1,590,414	1,578,466	1,647,496	1,636,273	1,598,943
Land, buildings and other property	884,043	835,781	766,140	742,069	337,068	331,781	324,016	336,378	330,887
Miscellaneous	456,907	561,903	530,727	462,641	290,012	184,337	180,823	155,471	145,536
Totals	4,858,402	4,818,030	4,606,119	4,591,629	4,030,893	3,970,225	3,873,550	3,678,479	3,680,935
LIABILITIES.									
County levy	563,909	537,085	470,342	506,361	471,820	502,359	438,579	391,918	374,176
Local school rates	280,178	273,812	229,731	240,810	219,686	225,894	189,527	190,308	193,869
Debentures outstanding (principal) for—									
Aid to railways	1,058,761	1,106,290	1,120,160	1,178,027					
Schools	481,665	496,311	505,250	479,737	3,366,617	3,299,557	3,409,744	3,154,428	3,153,646
Other purposes	1,401,841	1,437,222	1,464,080	1,460,875					
Loans for current expenses and interest on same	382,096	368,567	259,168	300,020	188,067	195,872	143,004	155,338	127,974
Miscellaneous	127,699	171,949	149,846	146,364	121,876	126,343	80,019	345 405	355,076
Totals	4,296,147	4,331,236	4,198,517	4,312,194	4,367,566	4,350,025	4,260,873	4,237,397	4,204,672

The total receipts do not include Legislative grants for schools, it not being considered a municipal transaction. This also refers to towns, villages and cities.

FINANCIAL STATEMENT—TOWN MUNICIPALITIES.

TABLE XIV. Summary showing the totals for all Towns in Ontario of the several items of Receipts, Disbursements, Assets and Liabilities for the four years ending December 31, 1891-94.

Schedule.	1894.	1893.	1892.	1891.
RECEIPTS.	$	$	$	$
Balance from previous year	149,368	158,635	197,338	161,123
Ordinary municipal revenue :				
Municipal and school taxes	1,914,869	1,828,308	1,857,622	1,693,266
Licenses, fees, rents, fines, etc	175,514	182,592	172,351	168,042
Water rates, electric light rates, etc	119,172	99,670	84,207	61,654
Refund of moneys loaned or invested, including special deposits (principal and interest)	242,012	268,100	175,192	197,970
Loans :				
Money borrowed for current expenses	1,784,808	1,556,720	2,253,385	1,849,370
Money borrowed on debentures for—				
Schools	69,700	131,000	45,750	104,800
Other purposes	679,314	1,049,259	928,768	950,707
Miscellaneous	72,941	68,980	83,918	94,518
Totals	5,207,698	5,343,264	5,798,531	5,281,450
DISBURSEMENTS.				
Expenses of municipal government :				
Allowances, salaries and commissions	118,508	126,183	121,024	122,134
Lighting of streets, water supply and fire protection	297,195	277,141	266,212	245,433
Other expenses of municipal government	108,395	120,866	88,677	91,486
Construction works :				
Streets, bridges and parks	329,030	375,048	389,614	458,559
Buildings and other works	292,537	366,301	679,559	573,127
Support of the poor and other charities	30,477	32,565	31,236	31,647
Administration of justice, including police service	65,764	62,368	59,968	58,284
County treasurer for levy	89,974	87,695	104,260	89,889
Payments on account of schools and education	646,750	682,157	610,347	629,781
Sinking funds and other investments	246,378	272,987	275,745	198,024
Loans repaid :				
Debentures redeemed (principal)	356,295	451,864	313,477	399,210
Interest on loans, advances and debentures	454,663	449,415	421,806	389,612
Refund of moneys borrowed for current expenses	1,809,287	1,745,529	2,076,615	1,623,816
Miscellaneous	196,734	143,777	201,356	173,110
Totals	5,041,987	5,193,896	5,639,896	5,084,112
ASSETS.				
Cash in treasury	165,711	149,368	158,635	197,338
Taxes in arrears	837,939	771,916	683,689	726,573
Sinking funds and other investments in stocks, mortgages, debentures, etc., including special deposits	*1,266,082	1 263,985	1,220,071	1,062 593
Land, buildings and other property	7,275,058	7,052,596	6,655,986	6,029,936
Miscellaneous	572,810	426,879	383,683	230,994
Totals	10,117,600	9,664,744	9,102,064	8,247,434
LIABILITIES.				
County levy	35,922	42,713	33,834	45,913
Local school rates	172,036	160,651	153,393	171,408
Debentures outstanding (principal) for—				
Aid to railways	716,956	848,557	869,611	885,077
Schools	1,013,064	962,226	866,401	856,535
Other purposes	6,856,422	6,384,500	5,727,092	5,002,559
Loans for current expenses and interest due on same	720,585	753,169	937,376	759,485
Miscellaneous	170,074	174,088	188,898	240,837
Totals	9,685,109	9,325,904	8,776,605	7,961,814

*See foot note to Brampton (page 99).

FINANCIAL STATEMENT—VILLAGE MUNICIPALITIES.

TABLE XV. Summary showing the totals for all Villages in Ontario of the several items of Receipts, Disbursements, Assets and Liabilities for the four years ending December 31, 1891-94.

Schedule.	1894.	1893.	1892.	1891.
RECEIPTS.	$	$	$	$
Balance from previous year	72,980	74,516	51,976	59,393
Ordinary municipal revenue:				
Municipal and school taxes	544,190	511,335	536,422	506,726
Licenses, fees, rents, fines, etc	43,832	46,327	44,286	44,935
Water rates, etc	12,989	10,426	8,080	7,506
Refund of moneys loaned or invested, including special deposits (principal and interest)	17,266	13,521	30,162	25,731
Loans				
Money borrowed for current expenses	140,187	125,035	153,585	128,785
Money borrowed on debentures for—				
Schools	23,050	20,340	50,437	18,500
Other purposes	79,577	35,325	99,160	45,559
Miscellaneous	33,312	14,254	25,004	17,842
Totals	967,383	851,039	999,052	854,977
DISBURSEMENTS.				
Expenses of municipal government				
Allowances, salaries and commissions	38,423	41,056	38,808	35,971
Lighting of streets, water supply and fire protection	42,989	33,489	31,766	30,569
Other expenses of municipal government	28,785	31,593	27,647	24,209
Construction works				
Streets, bridges and parks	97,768	96,349	84,743	102,091
Buildings and other works	65,191	27,279	85,293	24,934
Support of the poor and other charities	6,045	5,246	5,548	6,467
Administration of justice, including police service	7,551	4,305	4,644	4,224
County treasurer for levy	45,858	41,086	42,720	39,496
Payments on account of schools and education	240,156	221,561	265,842	214,166
Sinking fund and other investments	35,679	14,560	26,129	38,234
Loans repaid:				
Debentures redeemed (principal)	54,516	62,392	58,836	57,436
Interest on loans, advances and debentures	64,653	65,745	65,165	63,592
Refund of moneys borrowed for current expenses	135,732	103,106	158,454	129,605
Miscellaneous	36,697	25,292	28,951	32,008
Totals	900,043	778,059	924,546	803,001
ASSETS.				
Cash in treasury	67,340	72,980	74,516	51,976
Taxes in arrears	158,221	155,496	128,296	138,246
Sinking funds and other investments in stocks, mortgages, debentures, etc., including special deposits	*132,914	136,838	112,414	111,945
Land, buildings and other property	1,655 732	1,545,154	1,516,120	1,375,119
Miscellaneous	57,578	48,309	51,021	48,130
Totals	2,071,785	1,958,777	1,882,367	1,725,416
LIABILITIES.				
County levy	15,761	21,428	17,935	16,543
Local school rates	54,984	52,367	39,542	46,511
Debentures outstanding (principal) for—				
Aid to railways	124,952	128,624	134,418	144,073
Schools	345,960	341,092	335,302	300,091
Other purposes	686,640	639,766	646,522	581,326
Loans for current expenses and interest due on same	84,097	78,255	60,567	65,467
Miscellaneous	47,680	43,644	43,265	42,913
Totals	1,360,074	1,305,174	1,277,551	1,196,923

* See foot note to Port Elgin (page 109).

FINANCIAL STATEMENT.—TOWN AND VILLAGE MUNICIPALITIES.

TABLE XVI. Summary showing the totals for all towns and villages in Ontario of the several items of receipts, disbursements, assets and liabilities for the nine years ending December 31st, 1886-94.

Schedule.	1894.	1893.	1892.	1891.	1890.	1889.	1888.	1887.	1886.
RECEIPTS.	$	$	$	$	$	$	$	$	$
Balance from previous year	222,348	233,151	249,314	220,516	205,061	216,998	190,873	222,926	176,005
Ordinary municipal revenue:									
Municipal and school taxes	2,459,059	2,339,643	2,394,044	2,199,992	2,088,855	1,883,803	1,893,554	1,769,512	1,701,742
Licenses, fees, rents, fines, etc	219,346	228,919	216,587	212,977	278,363	247,262	205,178	161,989	144,890
Water rates, etc	132,161	110,096	92,287	69,160					
Refund of moneys loaned or invested, including special deposits (principal and interest)	259,278	281,621	205,354	223,701	295,385	272,265	180,383	133,562	137,071
Loans:									
Money borrowed for current expenses	1,924,995	1,681,755	2,406,970	1,978,155	1,848,178	1,725,599	1,501,174	1,171,674	923,161
Money borrowed on debentures for:									
Schools	92,750	151,300	96,187	123,300	1,005,488	1,127,172	1,109,272	684,545	534,511
Other purposes	758,891	1,084,584	1,027,928	996,266					
Miscellaneous	106,253	83,234	108,922	112,360	122,828	108,596	85,230	80,341	88,172
Totals	6,175,081	6,194,303	6,797,593	6,136,427	5,844,158	5,581,795	5,165,664	4,224,549	3,705,552
DISBURSEMENTS.									
Expenses of municipal government:									
Allowances, salaries and commissions	156,931	167,239	159,832	158,105	145,971	133,356	130,637	132,597	126,715
Lighting of streets, water supply and fire protection	340,184	310,630	297,978	276,002	253,087	216,760	192,067	190,042	161,978
Other expenses of municipal government	137,180	152,459	116,324	115,695	126,146	102,911	99,141	74,986	88,058
Construction works:									
Streets, bridges and parks	426,798	471,397	474,357	560,650	529,974	507,423	478,425	572,457	438,389
Buildings and other works	357,728	393,580	764,852	598,061	509,179	473,330	433,520	182,341	133,978
Support of the poor and other charities	36,522	37,811	36,784	38,114	35,307	34,226	34,324	33,787	34,510
Administration of justice, including police service	73,315	66,673	64,612	62,508	65,583	66,496	67,849	49,753	42,595
County treasurer for levy	135,832	128,781	146,980	129,385	135,522	127,537	125,437	118,659	121,142
Payments on account of schools and education	886,906	903,718	876,189	843,947	840,939	849,011	835,919	697,549	638,813

Sinking fund and other investments*	282,037	287,547	301,874	286,258	304,432	388,120	257,374	222,484	146,799
Loans repaid:									
Debentures redeemed (principal)	410,811	514,256	372,313	456,645	274,504	280,183	219,963	219,869	250,546
Interest on loans, advances and debentures	519,316	515,169	486,971	453,204	412,244	357,548	352,216	309,363	278,555
Refund of moneys borrowed for current expenses	1,945,019	1,853,635	2,235,069	1,753,421	1,788,010	1,633,212	1,477,014	1,059,571	805,841
Miscellaneous	233,431	169,069	250,307	205,118	207,744	206,621	244,780	170,298	214,586
Totals	3,942,030	5,971,955	6,564,442	5,887,113	5,623,642	5,376,724	4,948,606	4,033,756	3,182,505

ASSETS.

Cash in treasury	283,051	222,348	233,151	249,314	220,516	235,061	246,998	190,793	223,047
Taxes in arrears	996,160	927,412	811,985	864,819	773,923	715,167	620,256	551,910	529,251
Sinking funds and other investments in stocks, mortgages, debentures, etc., including special deposits	1,398,996	1,400,823	1,332,485	1,174,598	1,127,280	1,081,762	1,140,905	1,216,999	955,843
Land, buildings and other property	8,930,790	8,597,750	8,172,106	7,405,053	6,045,568	5,581,683	5,139,389	3,686,571	3,528,945
Miscellaneous	630,388	475,188	434,704	279,124	208,847	149,491	88,311	402,588	304,213
Totals	12,189,385	11,623,521	10,984,431	9,972,850	8,376,134	7,763,154	7,195,859	6,048,841	5,541,299

LIABILITIES.

County levy	51,783	64,141	51,769	62,456	63,046	63,309	61,848	48,183	44,336
Local school rates	227,020	213,018	192,935	217,919	183,807	175,353	146,981	109,781	113,685
Debentures outstanding (principal) for—									
Aid to railways	841,908	977,181	1,004,029	1,029,149					
Schools	1,359,024	1,203,318	1,201,703	1,156,626	7,099,648	6,371,763	6,146,561	5,261,079	4,795,540
Other purposes	7,543,062	7,024,266	6,373,614	5,585,885					
Loans for current expenses and interest due on same	804,632	831,424	997,943	824,952	592,030	529,777	522,911	503,964	387,933
Miscellaneous	217,754	217,732	232,163	283,750	224,278	276,959	255,542	267,204	245,640
Totals	11,045,183	10,631,080	10,054,156	9,158,737	8,162,809	7,417,361	7,113,843	6,190,211	5,587,034

* This includes s, ecial deposits and re-investments.

FINANCIAL STATEMENT—CITY MUNICIPALITIES.

TABLE XVII. Summary statement showing the totals for the thirteen Cities of the Province of Ontario of the several items of Receipts, Disbursements, Assets and Liabilities for the nine years ending December 31st, 1886-94.

Schedule.	1894.	1893.	1892.	1891.	1890.	1889.	1888.	1887.	1886.
RECEIPTS.	$	$	$	$	$	$	$	$	$
Balance from previous year	395,266	579,254	559,040	368,901	277,173	670,856	220,744	197,864	234,368
Ordinary municipal revenue:									
Municipal and school taxes	5,115,418	5,172,759	4,717,113	4,737,229	4,089,109	3,911,167	3,215,747	3,147,520	2,775,762
Liquor licenses	99,185	102,336	99,660	100 593	161,559	160,897	145,936	142,745	132,214
Other licenses	42,369	42,809	45,597	50,055					
Fees, rents, tolls, fines, etc	375,111	374,736	363,044	292,900	1,093,664	1,051,753	1,062,580	910,226	817,629
Water rates, electric light or gas rates, etc	986,249	885,333	802,571	886,139					
Interest on bank deposits, sinking fund and other investments and dividends on stocks	244,439	192,110	241,515	168,686	140,205	170,366	153,521	146,988	103,402
Subsidies and refunds:									
From government (except for loans and schools)	16,185	24,419	22,332	18,498	19,358	15,439	18,543	20,347	20,696
Refund of moneys loaned or invested (including sinking funds and special deposits)	512,083	292,122	26,481	294,746	359,220	552,292	188,187	97,084	385,728
Loans:									
Money borrowed for current expenses	2,214,476	2,874,212	2,654,513	3,961,752	4,622,735	2,777,851	4,681,893	3,299,781	2,135,868
Money borrowed on debentures—									
For school purposes	*67,000	15,000	380,522	138,745	1,426,717	4,855,674	1,640,912	1,821,254	899,010
For all other purposes	4,413,452	2,771,880	2,788,956	3,604,225					
Miscellaneous	187,974	395,797	721,667	1,683,081	417,992	456,336	428,843	284,006	393,057
Totals	14,669,207	13,722,767	13,423,011	16,305,550	12,607,732	14,622,631	11,756,906	10,067,815	7,897,674
DISBURSEMENTS.									
Expenses of municipal government:									
Allowances, salaries and commissions	153,305	159,147	154,754	154,844	154,237	150,365	130,488	126,638	124,344
Printing, advertising, postage, stationery	32,343	37,982	31,457	37,685	39,922	38,106	38,738	33,248	29,750
Insurance, heating, light and care of buildings	50 723	53,542	47,827	72,148	35,708	28,371	21,564	34,139	21,354
Law costs (including salaries)	69,380	66,846	55,780	35,312	45,926	35,769	36,942	22,267	19,471
Lighting of streets	278,626	275,618	265,313	270,337	840,809	856,873	767,247	687,947	561,681
Water supply and fire protection	750,721	685,179	586,951	633,455					
Election of members of council	17,483	10,750	10,556	8,188	68,436	70,984	60,408	57,165	34,388
Other expenses of municipal government	64,691	81,377	59,840	61,889					

* Hamilton, $40,000; Windsor, $27,000.

Construction works:									
Streets, bridges and parks	1,201,237	1,672,647	1,846,859	1,782,703	2,848,709	2,283,921	1,738,762	1,444,185	1,089,603
Waterworks, sewers and electric light plant	404,513	277,326	316,074	798,803	1,188,419	1,268,687	789,651	645,951	337,578
Buildings and other property	459,197	639,460	281,267	182,681					
Board of Health (including salaries)	78,510	70,434	77,810	114,831	105,143	110,966	109,140	97,360	94,556
Support of the poor and other charities	150,597	137,472	143,322	143,238	129,073	138,934	117,265	88,919	81,566
Administration of justice, police service, etc	516,568	510,034	516,583	535,662	489,512	470,185	441,397	358,960	385,468
Payments on account of schools and education	1,044,689	1,068,058	979,176	1,062,372	1,060,838	1,096,625	863,797	803,406	613,369
Investments and deposits:									
Sinking fund, investments and deposits	913,362	989,008	820,751	597,411	901,120	531,568	674,014	347,842	523,728
Other investments and special deposits	136,564	126,404	40,467	28,972					
Loans and interest:									
Debentures redeemed { Principal	3,196,946	2,354,186	456,150	664,236	421,635	1,150,997	259,092	186,898	152,836
Debentures redeemed { Interest	1,595,713	1,566,840	1,521,264	1,305,958	1,427,955	1,295,860	1,231,665	1,132,677	1,061,908
Interest or discount on loans, advances, etc	101,462	86,847	116,540	252,690					
Refund of moneys borrowed for current expenses	2,691,441	2,665,504	4,004,716	4,900,248	2,648,523	4,026,535	3,303,651	3,139,737	2,073,869
Discount on debentures sold	107,758	41,888	148,393	107,291	332,866	790,712	462,249	639,632	484,342
Miscellaneous	294,887	350,952	361,897	1,905,456					
Totals	14,290,666	13,327,501	12,843,757	15,746,510	12,238,831	14,345,458	11,086,050	9,847,071	7,699,810
ASSETS.									
Cash in treasury (exclusive of sinking funds)	378,541	395,266	579,254	559,040	368,901	277,173	670,856	220,744	197,864
Taxes in arrears	1,818,788	1,732,209	1,555,491	1,395,387	1,239,142	1,018,218	1,088,844	1,061,740	1,164,319
Sinking funds and other investments in mortgages, debentures, stocks, etc., (including special deposits)	6,963,222	6,425,681	5,619,138	4,785,238	4,445,573	3,912,987	3,881,441	3,292,513	2,780,681
Land, buildings, etc	11,917,357	11,372,880	10,274,362	9,598,207					
School property (including equipment)	3,506,648	3,224,577	3,207,059	3,112,053	21,622,494	18,998,605	18,166,326	16,491,865	15,421,936
Waterworks	10,107,996	9,439,334	9,126,394	8,921,883					
Other property (cemetery, fire halls, etc.)	1,313,667	1,194,684	1,149,700	1,140,162					
Miscellaneous	4,017,423	4,941,034	5,455,789	5,063,179	5,110,639	2,836,608	1,752,732	3,031,010	2,448,412
Totals	40,023,582	38,725,665	36,967,187	34,535,149	32,786,749	27,042,991	25,560,199	24,037,812	22,013,212
LIABILITIES.									
Local school rates unpaid	27,194	34,185	76,582	61,343	61,917	76,002	44,595	69,767	77,064
Debentures outstanding (principal):									
Aid to railways	2,164,754	2,212,386	2,282,075	2,279,220					
Schools	2,146,665	2,081,874	2,119,322	1,767,801					
Local improvements	10,773,224	10,041,708	9,405,061	8,057,144	27,110,712	26,096,152	21,769,261	20,080,922	18,469,933
Municipal works	12,716,802	14,468,464	13,878,693	13,192,295					
All other objects	6,970,919	4,594,831	5,081,220	4,956,643					
Loans for current expenses and interest due on same	1,305,226	1,960,411	1,132,948	2,515,938	3,544,503	1,479,160	2,622,807	1,187,874	1,027,816
Miscellaneous	1,898,733	1,511,872	2,018,420	1,863,449	2,105,182	2,283,991	1,392,095	1,819,084	1,345,781
Totals	38,209,307	36,905,531	36,224,321	34,693,773	32,822,314	29,935,305	25,828,758	23,157,647	20,920,594

FINANCIAL STATEMENT—COUNTY MUNICIPALITIES.

TABLE XVIII. Summary statement showing for all Counties of Ontario the aggregate totals of the several items of Receipts, Disbursements, Assets and Liabilities for the nine years ending December 31st, 1886-94.

Schedule.	1894.	1893.	1892.	1891.	1890.	1889.	1888.	1887.	1886.
RECEIPTS.	$	$	$	$	$	$	$	$	$
Balance from previous year	262,914	347,192	303,802	298,066	275,552	375,556	*305,689	296,571	286,903
Ordinary municipal revenue:									
Rates from local municipalities	1,258,060	1,231,039	1,377,862	1,303,572	1,312,795	1,244,209	1,399,447	1,269,498	1,245,174
Licenses	13,097	14,013	12,843	12,602	83,882	104,697	148,657	130,886	57,220
Fees, rents, tolls, fines, etc	24,966	29,539	33,394	35,100					
Surplus fees from registrar	13,351	16,365	19,636	20,270					
Interest on deposits and dividends on investments	33,063	31,215	33,638	49,433	45,259	44,202	42,055	31,183	31,912
Loans:									
Money borrowed for current expenses	752,801	697,950	627,984	640,987	466,258	441,589	348,856	356,955	400,645
Money borrowed on debentures	301,600	158,323	27,900	248,470	114,847	58,178	120,515	92,653	128,192
Non-resident taxes collected	89,459	95,026	103,997	107,513	93,130	101,671	109,823	110,791	112,117
Towns or cities separated from county, for various services	102,615	96,147	98,139	94,891	101,800	91,279	99,261	83,835	114,990
Subsidies and Refunds:									
Refund of moneys loaned or invested	381,353	216,612	207,475	459,897	133,275	175,176	168,451	95,354	109,081
Received from Government:									
For schools	142,180	139,714	140,461	143,050	142,943	144,194	152,496	151,911	148,555
For administration of justice	141,868	122,261	120,658	144,545	139,312	120,926	129,201	118,723	127,070
For other purposes, except loans	4,464	209	4,141	29,339	33,273	34,010	39,106	44,520	42,680
Miscellaneous	48,469	111,718	37,838	40,484					
Totals	3,570,260	3,307,323	3,144,768	3,628,219	2,942,326	2,935,687	3,063,510	2,785,580	2,804,519
DISBURSEMENTS									
Expenses of municipal government:									
Attendance at meetings of council and committees	67,512	67,100	63,959	67,920	64,132	59,617	55,523	57,013	54,569
Allowances, salaries and commissions	77,472	82,234	84,771	89,555	94,412	93,737	92,538	89,391	96,969
Printing, advertising, postage and stationery	22,113	22,921	21,593	22,726	23,275	20,783	23,395	22,663	22,722
Insurance, heating, lighting and care of buildings	37,389	43,257	37,939	30,972	29,423	27,801	29,415	29,948	30,226
Law costs (including salaries)	28,334	17,209	11,181	11,464	29,459	28,174	22,896	48,976	23,731
Other expenses	16,393	17,187	18,394	20,654					
Construction Works:									
Roads and bridges	258,903	217,802	194,941	235,411	225,913	197,014	238,300	213,044	225,104
Buildings and other works	29,963	70,487	75,614	80,556	100,980	75,152	53,194	105,270	78,098

Support of the poor, and other charities	70,548	60,125	61,182	61,794	56,678	56,961	67,103	43,891	46,326
Administration of justice, gaol maintenance, etc	455,744	429,373	436,197	423,350	438,453	433,592	456,057	389,286	386,588
Grants to schools and other payments for education	475,245	477,940	467,895	454,795	427,510	428,048	441,068	368,256	363,645
Sinking funds and other investments, including special deposits	229,430	260,527	123,814	174,607	179,823	214,223	281,004	269,861	175,878
Loans and interest:									
Debentures redeemed:									
Principal	382,894	350,548	243,595	645,834	191,700	241,280	139,723	146,636	240,364
Interest	138,768	148,712	151,618	179,572	201,819	209,820	212,181	214,277	222,651
Interest or discounts on loans, advances, etc	22,321	18,439	18,033	16,366					
Refund of moneys borrowed for current expenses	852,107	626,091	649,997	644,578	390,072	376,190	347,063	345,876	385,526
Non-resident taxes paid local municipalities	94,583	95,820	112,247	98,056	95,589	105,177	107,985	116,421	109,428
Miscellaneous	111,368	52,837	54,608	68,207	95,022	94,556	100,679	86,067	76,133
Totals	3,346,057	3,044,169	2,797,576	3,324,417	2,644,260	2,660,135	2,687,954	2,486,648	2,567,948
ASSETS.									
Cash in treasury	224,203	262,914	347,192	303,802	298,066	275,552	375,556	298,932	296,871
Rates due from local municipalities	668,960	654,171	550,787	609,513	613,135	632,587	588,236	666,867	649,771
Sinking funds and other investments in stocks, mortgages, debentures, etc., special deposits, etc	520,216	672,739	628,824	712,465	1,164,169	1,117,887	1,099,129	994,962	878,937
Land, buildings, furniture, etc	3,106,264	3,008,129	3,046,160	2,973,377	2,942,390	2,942,571	2,865,674	2,827,065	2,770,567
Miscellaneous	191,831	326,994	345,897	315,535	225,260	256,142	204,466	156,347	146,084
Totals	4,711,474	4,925,013	4,918,860	4,914,692	5,243,020	5,204,739	5,133,661	4,944,153	4,741,730
LIABILITIES.									
School grants unpaid	35,954	40,249	48,669	34,058	32,938	39,568	44,289	45,474	43,488
Debentures outstanding (principal for)									
Aid to railways	740,474	783,747	927,925	1,023,718					
Schools	2,963	3,898	4,710	5,562	3,144,008	3,220,860	3,403,961	3,446,891	3,505,744
All other objects	1,516,735	1,551,947	1,599,180	1,718,231					
Loans for current expenses and interest due on same	459,674	538,982	467,128	459,477	457,485	381,299	316,503	338,578	324,798
Local municipalities for non-resident taxes collected	18,518	19,717	20,510	28,840	19,269	23,461	25,273	22,708	30,344
Miscellaneous	69,199	73,278	91,750	83,993	101,782	113,972	173,390	149,022	149,905
Totals	2,843,517	3,011,818	3,159,867	3,353,879	3,755,482	3,779,160	3,963,416	4,003,273	4,054,280

* Including balances omitted from certain accounts omitted from return of 1887 in York County, and by reason of a special audit in Prince Edward.

FINANCIAL STATEMENT—ONTARIO MUNICIPALITIES.

TABLE XIX. Summary statement showing for all Municipalities of Ontario (including counties, townships, cities, towns and villages), the total of the several items of Receipts, Disbursements, Assets and Liabilities for the nine years ending December 31st, 1886-94.

Schedule.		1894.	1893.	1892.	1891.	1890.	1889.	1888.	1887.	1886.
RECEIPTS.		$	$	$	$	$	$	$	$	$
Balance from previous year	*a*	1,356,761	1,698,895	1,613,373	1,361,843	1,199,140	1,726,279	1,127,264	1,148,744	1,082,408
Ordinary municipal revenue:										
Municipal and school taxes	*b*	12,148,097	11,975,445	11,820,733	11,377,699	10,741,827	10,110,612	9,464,466	9,332,256	8,860,683
Licenses, fees, rents, tolls, fines, etc	*a*	836,158	856,929	841,789	776,564	1,691,410	1,634,035	1,611,817	1,391,089	1,199,628
Water rates, electric light or gas rates, etc	*c*	1,118,410	995,429	894,858	955,299					
Surplus fees from registrar	*d*	13,351	16,365	19,636	20,270					
Rates from local municipalities	*d*	1,258,060	1,231,039	1,372,862	1,303,572	1,312,795	1,244,209	1,399,447	1,269,498	1,245,154
Subsidies and refunds:										
Received from Government on account of—										
*Schools	*d*	142,180	139,714	140,461	143,050	142,943	144,194	152,496	151,911	148,555
Administration of justice	*d*	141,868	122,261	120,658	144,545	139,312	120,926	129,204	118,723	127,070
Refund of moneys loaned or invested, principal and interest, including special deposits	*a*	1,721,963	1,240,663	949,153	1,714,189	1,242,172	1,579,202	1,029,316	725,966	971,515
Loans:										
Money borrowed for current expenses	*a*	5,483,286	5,711,383	6,108,802	7,161,248	7,414,270	5,348,896	6,861,607	5,194,134	3,795,420
Money borrowed on debentures (face value) for—										
School purposes	*a*	214,074	223,697	571,416	309,205	2,950,880	6,371,104	3,224,685	2,890,151	1,839,906
Other purposes	*a*	5,759,403	4,266,935	4,145,783	5,181,465					
Non-resident taxes collected	*d*	89,459	95,026	103,997	107,513	93,130	101,671	109,823	110,791	112,117
Towns or cities separated from counties	*d*	102,615	96,147	98,139	94,891	101,800	91,279	99,261	83,835	114,990
Miscellaneous	*a*	568,275	743,335	1,024,394	2,075,473	723,732	759,473	720,211	581,016	779,861
Totals		30,953,960	29,413,263	29,826,054	32,726,826	27,753,411	29,231,880	25,929,597	22,998,117	20,277,307
DISBURSEMENTS.										
Expenses of municipal government:										
Attendance at meetings of council and committees	*d*	67,512	67,100	63,959	67,920	64,132	59,617	55,523	57,013	54,569
Allowances, salaries and commissions	*a*	673,268	693,808	687,239	684,306	669,050	619,107	611,354	614,062	612,147
Lighting of streets, water supply and fire protection	*c*	1,369,531	1,271,427	1,150,242	1,179,794	1,093,896	1,073,633	959,314	877,989	723,659
Other expenses of municipal government	*a*	614,722	632,230	548,639	536,220	526,167	474,800	429,150	427,988	370,986

* The Government grants to Counties only are shown here.

Construction works:											
Roads, bridges, streets and parks	*a*	*2,683,713	3,168,127	3,259,808	3,334,087	3,883,624	3,673,729	3,079,945	2,963,864	2,482,310
Buildings and other works	*a*	1 278,794	1,392,689	1,455,098	1 683,716	1,798,578	1,817,169	1,276,365	933,562	649,654
Drainage works	*c*	297,286	275,941	237,215	275,551	234 799	192 161	171 844	273,736	251,215
Administration of justice, gaols, police, etc	*f*	1,045,597	997,080	1,017,392	1,021,520	993,548	970,183	965 503	797,971	814,651
Support of the poor and other charities	*a*	323,288	298 040	308,157	311,567	288,527	294,345	285 204	231,070	227,318
County treasurer for levy	*g*	1,294,379	1,281,824	1,305,698	1,279,609	1,305,443	1,237,304	1,286,054	1,228,936	1,215,578
Payments on account of schools and education	*a*	4,238,081	4,269,723	4,228,004	4,141,417	4,213,876	4,231,033	3,965,572	3,752,142	3,488,671
Sinking fund and other investments, including special deposits	*a*	1,846,747	1,813,254	1,452,747	1,231,320	1,596,403	1,354,755	1,403,561	955,284	1,027,365
Loans repaid:										
Debentures redeemed (principal)	*a*	4,424,647	3,574,353	1,437,070	2,408,097	1,213,673	2,115,879	1 045,743	818,281	866,075
Interest on loans, advances and debentures	*a*	2 562,607	2,508,691	2,482,156	2,498,294	2,240,692	2,057,938	1,999,760	1,820,590	1,715,620
Refund of money borrowed for current expenses	*a*	5,992,779	4,362,893	7,320,328	7,806,602	5,305,931	6,389,299	5,459,226	4,890,881	3,598,242
Non resident taxes paid	*d*	94,583	95,820	112,247	98,056	95,589	103,177	107,986	116,421	109,428
Miscellaneous	*a*	952,200	813,502	1,011,270	2 555,377	867,460	1,338,611	1 101,435	1,124,358	1,018,511
Totals	..	29,639,734	28,076,562	28,127,159	31,113,453	26,291,568	28,032,740	24,203,318	21,884,118	19,125,999
ASSETS.										
Cash in treasury	*a*	1,314 226	1,356,761	1,698,895	1,613,373	1,361,843	1 199,140	1,726,279	1,113,999	1,151,308
Taxes in arrears	*a*	4,411,047	4,282,438	3,740,979	3,772,078	3,352,104	3,168,072	2,967,446	2,700,477	2,865,313
Rates due from local municipalities	*d*	668,960	654,171	650,787	609,513	613 185	632,587	588,236	666,867	649,771
Sinking funds and other investments	*a*	10,325,356	9,870,539	8,976,898	8,046,071	8,327,436	7,691,092	7,738,971	7,140,747	6 214,404
Land, buildings, and other property, including water-works, schools, etc	*a*	39,766,705	37,673,201	35,741,921	33,852,806	30,947,520	27,853,640	26 546,405	23,341,799	22,052,135
Miscellaneous	*a*	5,296,549	6,305,119	6,767,117	6,120,479	5,834 758	3,406,578	2,226,332	3,745,596	3,044,245
Totals	..	61,782,843	60,092,229	57,476,597	54,014,320	50,436,796	43,951,109	41,762,669	38,709,285	35,977,176
LIABILITIES.										
County levy	*g*	617,942	606,103	522,111	568,817	535,866	581,449	520,240	457,707	441,023
School rates and grants unpaid	*a*	570,341	561 264	547,917	554,130	498,348	517,017	425,392	415,330	427,937
Debentures outstanding (principal) for:										
Aid to railways	*a*	4,805,897	5,079,604	5,334,129	5,510,114					
Schools	*a*	3 990,317	3 885,401	3,830,985	3,409,726	40,720,985	38,988,332	34,729,527	31,943,320	29,924,863
All other purposes	*a*	40,928,373	39,118,238	38,001,848	34,969,013					
Loans for current expenses and interest due on same	*a*	3,151,628	3,639,384	2,857,182	4,100,387	4,782,085	2,586 108	3,605,225	2,185,754	1,868 521
Local municipalities for non resident taxes	*d*	18 518	19,717	20,510	28,840	19 269	23,461	25,273	22,708	30,344
Miscellaneous	*a*	2 311,135	1,969,954	2,522,179	2,377,566	2,554,618	2,785,484	1,861,233	2,563,709	2,073,892
Totals	..	56 394,154	54,879,665	53,636,861	51 518,583	49,108,171	45 481 851	41,166,890	37,588,528	34,766,580

(a) All municipalities; (b) townships, cities, towns and villages; (c) cities, towns and villages; (d) counties; (e) townships; (f) counties, cities, towns and villages; (g) townships, towns and villages. * Of this amount $63,808 is duplicated, as this is the aggregate of road grants by counties to minor municipalities, which in turn make disbursements on roads, etc.

NOTES AND COMMENTS FROM MUNICIPAL RETURNS AND CORRESPONDENCE.

I do not keep any account of the assets and liabilities. I never know what jobs the council is letting. I only know when they come with their orders for money. I do not know what this township is saddling on to other municipalities, nor what other municipalities (are) putting on this municipality until the councils have settled and passed their orders. In fact I know nothing much of the assets and liabilities. The clerk of the municipality keeps this account.

It appears the late treasurer kept no account of the school moneys of the township, therefore I am unable to make my returns to the county auditors.

. . . I have been convinced for some years that the area of cleared land in this township has been very much understated. . . . Assessors seemed to regard land as cleared only when it was clear of stumps or nearly so. . . . I am under the impression that ratepayers were accustomed to understate the acreage of their clearing to prevent their assessment being raised. . . . We have a change of assessors this year. The new man . . . is thoroughly acquainted with the township. . . . The result has been that he reports an increase of 2,000 acres in the cleared land of this township.

. . . All I can find in regard to township affairs are receipts and expenditures. For assets and liabilities, there is nothing but drain debentures against the municipality. It would be hard work to find out the amount, as I would have to visit all banks that hold the same, as I have no account of them in my possession. . . . I can't find any papers regarding it, as I am new in the position they might have been lost before I took charge of this place.

. . . I return my report unfinished. I can't fill up those questions. Last year's collection roll is not collected. I did not receive a cent yet (May 1, 1896) from the collector. I am not to blame; the council is.

. . . We have a crank auditor who refuses to make the audit of the collector's roll. We propose to make him come to his milk or no pay. I understand this same auditor sent you a copy of the audit, the same was submitted to council. The council refused to accept the audit and referred it back for correction.

. . . I very much regret the apparent discrepancies. I must ask you to consider well the fact that many of us clerks get almost nothing. My salary is $130 per year, and it takes most of my time. This year's council is a hard one.

. . . They (the assessors) tell me it is impossible to give any accurate statement. They say there is now no swamp or waste lands in the township, and that they cannot get correct information in regard to wood land, as some in giving in wood land include stumpy land and fallow which is almost ready to break up.

. . . The assessor has not filled in any of the following columns: Cattle, sheep, hogs, horses, acres of wood-land, swamp, orchards or garden, fall wheat and steam boilers, ... he believing it was unnecessary.

The return of population 5,136 is evidently an error, the correct figures being 4,669.

I can account for errors by the persistence of councils in always employing the cheapest men who offer without any regard to qualification. That was done this year with the result that I had a week's work to put the roll in shape, and all the statistics are comparatively valueless. The school census shows only about half of last year's. The assessor for 1894-95 was a competent man, and I would have confidence in his figures, but he wanted $20 more salary than the other, and that was too important a consideration for our financiers.

. . . With regard to swamp or waste land, we have not an acre in the township, owing to the great amount of drainage which has been done.

. . . The pay of the chief of police has been placed under the head of "salaries of municipal officers," as he is a Jack of all work—caretaker of town hall, lamplighter, thistle inspector, truant officer, sidewalk mender, bell ringer, crossing sweeper, etc.

. . . In some concessions in this township the lots are short and in others they overrun; without an actual survey and official measurement the assessor must take the figures given by the owners for the time being.

A ditch . . . was excavated by the council and the money raised to pay for it by the note referred to. The lands benefited by the said drain are assessed for just enough to meet the note and the interest thereon. The assessment as well as the note do not appear in the report, as they are entirely distinct from municipal business. The item

$725.43 in the liabilities was money already collected on drainage account and not applied to reduction of note.

The difficulty in a small town like this is to secure a competent treasurer at a salary that the taxpayers will approve of. The head of the council . . . rarely holds office over two years, and he cannot fully keep the run of the finances and may not always be competent to do so.

. . . A high school debenture was paid. . . . In making up their statement the auditors have called this a *local improvement debenture*, which has given rise to the confusion.

. . . We have tried to furnish you with the required information, but have met with great difficulty in not having a copy of the statements that were sent you, especially as we cannot find the books of the town for the years before our present treasurer was appointed.

On the 31st day of December a cheque was issued for $3,400. This was largely taken from the special deposit and paid for the railway debentures, which accounts for the discrepancy of that amount. We cannot explain how it was that the town auditors overlooked this.

I have a suggestion to make, and if it meets with your approval hand it over to the highest authorities. A model treasurer's book to be supplied with the heading for every account necessary to give the positions of the town's affairs that could be balanced at the foot of each page, or at the end of each month. Uniform book-keeping would lead to uniform audit, and your returns from all the municipalities would be alike. Under the present system each person keeps his books in his own fashion, if he keeps books at all.

The treasurer has been a little careless in the way he has been keeping the accounts, but the auditors have taken much pains in getting the accounts in a proper shape, and I think are as near correct as may be.

. . . I have no way of ascertaining the correctness of the assessors' figures.

. . . I believe the number he (the assessor) gives for present year is the nearest correct, and is not in excess of the actual number.

Aggregate of Assessment Rolls does not give the days of Statute Labor, and I am not in a position without a lot of extra work to furnish it.

Nearly all Statute Labor work charged had been performed and certificates produced when taxes were demanded; cannot give information.

Mr. McK——'s assessment is the most accurate for several years. . . He is a person of some judgment. . . . For years tenders were taken for offices, and the lowest taken . . . and he did the work in proportion to the pay he got for assessing. The amount of work thrown on clerks when incompetent officers are employed is enormous. In 1894 I paid $80 out of my own pocket to get a person to make such corrections as the School Act required.

No record of number of days of statute labor performed is available.

. . . It will be impossible for our treasurer to make a financial statement for the whole of the year 1894, as he was not appointed to the office until May, 1894.—[Reeve.]

(1). None of the debentures named in your letter of advice were sold by me at any time, but were, by instruction of the Municipal Council, handed at once to the respective Boards of School Trustees of the School Sections in whose favor they were drawn, to be sold by them when, where, and to whom they saw fit. (2). I presume the proceeds were paid to the Schools named, by the parties purchasing their respective debentures to the full amount specified in each. . . .

". . . The cause of the decrease is, the county's demand is $900 less than in former years, also the township tax is some lower, the council not having spent so much money on roads, &c."

. . . The sum $—— was unpaid municipal orders which sometimes are called *Debentures*. . . .

. . . I find the auditors continued their audit up to 1st February, of this year (1895) . . . Their attention was called to the section (of the Act) by the clerk, but unfortunately they did as usual. . . ."

. . . The township issued debentures for school sections. The auditors and treasurer took the view that the sections owed it and not the township. The Province in its annual showing would have just as good a right to claim as a debt all the different towns and cities owe, because it passes Acts authorizing them to borrow . . ."

. . . We have in our municipality debentures issued for local drainage, which we have not hitherto included in liabilities of township from the fact that the lands lying adjacent to and immediately benefited thereby have been assessed for the same

It would act as a splendid safeguard for townships if the Government could pass a measure making it compulsory for all debentures and investments to be drawn up in the name of the reeve as well as of the treasurer.

. . . The debenture reported is the only one outstanding. Being a school debenture which was handed to the trustees, no entry of the proceeds would appear in the township books.

. . . I have given principal and interest separately on fire engine, but cannot do so on the railway debentures, as I have not access to the book containing the by-law.

". . . Probably the present council is somewhat more economical than its predecessors, but the principal cause of reduction, is, that this is a year of peace. In 1893 and 1894 the council had to raise money to pay the costs of expensive law suits, and this year moreover, a large amount was received from the sale of a mill which had fallen into the hands of the corporation.

. . . In 1893 the council expended on roads and bridges the sum of $1,662.34. In 1894 the sum of $1,643.95 was expended on roads and bridges, and during the first nine months of the present year (1895) the sum of $1,322.30 has been laid out on roads and bridges; while the council of the present year did not deem it advisable to levy any sum whatever for the improvement of roads and bridges for the coming year. Hence the decrease in the total amount levied.

The exceedingly dry summer, the complete failure of the hay crop and the partial failure of other feeds and consequent depression among the ratepayers, amply justified the council in its action of trusting the care of roads entirely to statute labor during the year 1896.

. . . We would strongly advise that for future audits the clerk's minute book be at hand that the auditors may be able to compare the orders in council with payments as shown in treasurer's book."—[Auditors.]

. . . Enclosed are the returns asked for. I have taken a good deal of pains with them, and I hope you will find them correct. Would it not be just and reasonable to allow me some remuneration for my work—say $5, or whatever you think it is worth?

. . . The assessors do not seem to get a correct statement of the swamp, and woodland; they get the two mixed.

. . . It would be a good thing if you could insert in your report surprise at so much work for so small salary, especially when $35,000 is security required.
[NOTE.—This township treasurer's salary per year was $140.]"

Our town council has not directed the auditors to furnish a statement in detail.

. . . I might state that some ditch rates are paid direct to the treasurer of the municipality and, therefore, do not appear on the collector's roll.

. . . We do not put statute labor on assessment roll, only on road lists. It is too much labor to find out the number of days.

. . . This township has no debts of any kind. The only debentures outstanding are for school buildings, and these are payable by local school rate.

. . . Our municipal auditors have not made out any statement of the assets and liabilities of the municipality.

. . . I can find no official record of the area of the village, neither in the by-law incorporating it, nor on the map.

. . . I omitted to state amount levied for general municipal purposes.

. . . Taxes are paid to treasurer up to 16th November, when a collector will be appointed to collect what is unpaid.

. . . There is one difficulty in obtaining correct information *re* woodland; so many people have the idea that the more cleared land they return the higher will be their taxes, and, therefore, return more woodland than they in reality possess.

. . . I have no record in my office as to the number of days (of statute labor).

. . . Some assessors think there is no necessity to be very particular about details, and, therefore, take no trouble to fill in the proper column, the number of acres cleared, etc.

. . . There was no sinking fund before 1893—that was the first year we levied or collected for sinking fund. Our debentures will be due December 30, 1896. We are going to pay $10,000 and renew for $30,000.

We would recommend that the collector enter on his roll the date of payment of taxes and also the amount of interest he receives on taxes.—[Auditors' report].

All Statute Labor in 1894 commuted at 35 cents a day, yielded $1,634.

. . . Municipal offices are made so largely a question of money, that efficient service is not always secured. . . .

Municipal offices are peddled down to be little better pay than farm laborers' wages, and the result is that we really don't have the "Assessment" of the townships done any more,—it is little better than a farce,—and townships in this section are all alike. Some remedy is greatly needed, but how to get at the true starting point of reform, is a difficult question.

. . . The sum of $2,109 was a Sinking Fund that was raised for one year only, and as the rate in the By-laws would raise from three to four times more than required, the town got a Bill passed through the Legislature consolidating the debt of the town and permitting it to borrow the Sinking Fund of $2,109.00 from year to year, on condition that it should be replaced on or before Dec. 14th of each year, and so continue to borrow and replace it until the town finally disposed of it by By-law either for school or fire protection purposes, which was done by the council in 1894.

Re Sinking Fund: "I find that the whole sum at credit of this fund is $566.63. . . . it should be $7,602.72. The explanation made by the reeve was that the council was not aware of the special obligation connected with this fund, and that a certain sum which was raised therefor and amounted to $568.72 was used to assist in retiring maturing debentures."—[Special Auditor.]

. . . In 1894 we levied 4 mills in the dollar and this year, 1895, only 3 mills in the dollar; because . . . the council agreed not to spend any money this year for gravelling roads,—the work had to be done by Statute Labor. . . .

. . . Those Railway debentures were in force before I became treasurer. My books do not show the amount of the debentures at the time they were issued. . . . (The amount was $28,000).

In regard to the School debentures, they are on a small portion of the township, formed as a union section with the village of ——— so they are for village school house, but we have to pay a portion of the debentures yearly, which amount is included in the sum paid to "School Boards on account of School rates." [There were two issues of School debentures, 1st for $8,000; 2nd for $1,200.] The amount unpaid must be got from the clerk as I have no record of it. All I have is what I have paid. . . .

. . . That money was borrowed by council, without, at the time, making any record of it, and it must have been several years ago. It is now paid. . . .

. . . I had some calculations on another paper and took up the wrong one when I filled up report, when you sent back complaining of error. I looked on the wrong scrap, and saw 7 in place of 9, that was the error. It has taught me the necessity of comparing the figures of one year previous, in future.

. . . I gave it to you the same as the assessor returned it to me, but I find in adding it up he made a mistake of 1,000.

. . . It has been the policy of the council that so long as there were sufficient taxes outstanding to cover the sinking funds, it was better from motives of economy to use the collections for current debts. . . . I am in hope however that before long I will be able to have a sinking fund in reality. . . . The amount shown as due the fund, 1891, is so much smaller than in 1892 or 1893 that I am inclined to think that the figures given for 1892 may include some of what should be charged in 1891. . . . This was all before my time in office, and . . . I have not been able to lay my hands on . . . data to verify what I say.

. . . I cannot make anything out of the $5,317.58 [amount of overdraft on bank 1894, as per auditors' statement of receipts]; that must be a mistake. The amount shown in the hands of the collectors was not included in the statement of receipts prepared by the auditors, but I have included it now to make a proper balance.

. . . It has been customary for the treasurer to keep his book open a few weeks after the close of the year, till the collector completed his work. The collector would pay to the treasurer taxes which were entered before balancing of the book, as if they had been received before 31st December . . . We have seen the inaccuracy, and the reeve says he will see to it that the collector will complete his work in time to have it reported correctly next year.

. . . There has been no need to spend so much money this year in gravelling streets or building sidewalks as heretofore.

. . . Our present council is trying to be economical, and we also raised sufficient last year to pay off two debentures instead of one.

. . . The amount of personal property is not given separately from the income. I have returned it to you as it is by the assessment roll returned to me.

. . . The discrepancy in the debentures mentioned occurred by the late treasurer deceiving the auditors by mutilating the debentures until the last debenture appeared to be paid. The holder of the debentures was also induced to remain quiet until after the death of the treasurer. The corporation was then sued for amount of debentures, $750, which with costs, when paid, amounted to $1,100.

. . . Our assessor for 1895 did not add up column 20, and refused to do so when I asked him. I don't think it is my work to do so after he has returned his roll and sworn that it is complete and correct.

. . . The auditors overlooked a four hundred dollar note which had been renewed.

. . . I will have the returns made as soon as the collector returns his roll. Unfortunately the township has fallen into a bad habit of not pressing for taxes, hence the collector has not yet returned his roll. Next meeting of council will be on June 1st (1896), after which the returns [for 1895] will be made to your department.

It is difficult to answer the questions regarding statute labor as I do not keep a record and we allow one day's statute labor for every four rods of wire fence built along the public highway so as to prevent snow from blocking up the roads. Some farmers put in all their statute labor in that way.

A clerk remarks as to number of days of statute labor for 1895: "No record."

Some pathmasters never return their road lists.

The present council . . . . . has been putting forth every effort to complete the returns for past years. . . . . The council has discovered that there is a shortage of $3.952.65 in the bank account of the late treasurer, but the bail who are responsible, are making good the shortage. . . . . As the accounts are very indefinite, and as it is difficult at present to reach full information on some points, I trust your Department will not exact any further information for past years, and in future, returns will be promptly made.

. . . The apparent discrepancy, is caused by the fact that for several years the interest accruing on the sinking funds on deposit, while it was entered regularly on the bank pass books, for the various accounts, had never been credited up to the funds in the books here. Also, that in the year 1893, with the one exception of the water works fund, no sinking funds were deposited at all, and the whole was charged in 1894. . . .

The returns for the years 1893 and 1894, were nearly correct—the return for 1895 was too high; . . . in that year our assessor added the number of children on the truancy book in addition to counting them on the roll. The figures for 1896 are too low on account of the assessor omitting to make a correct census of the children.

. . . I was not aware that the law had been so amended as to require an auditors' statement in detail. [Placed on the Statute eight years previous to this.]

We would respectfully suggest that with the appointment of a new treasurer, proper books be opened and kept, and in the future appointment of auditors, one, at least, should be conversant with the duties he undertakes, so that the reports made to you may be a correct statement of our affairs.

There is a marked absence of proper vouchers for payments made in the past.

. . . I have found it impossible to get the information required, as the books had not been well kept, and the new officers are not yet well posted in their duties.

. . . The village auditors must have overlooked the 'balance of school moneys,' in treasurer's hands, 31st December, 1894. . . . I have never taken any notice of any balance in their [road commissioners'] hands, in any previous years. . . . It would show, instead of a deficit, a balance in treasurer's hands. . . .

. . . Early in the year 1892 Mr. ——— lent us the full sum of $1,455.50, without interest, and in the same year (1892) the township levied the one-tenth of this sum, as per by-law passed to that effect, and paid it over to Mr. ——— (that is, the sum of $145.50). The same steps were taken for the year 1893, and will also be done in this year, as the same provisions for levying the said sum of $145.55 have been taken. But Mr. ——— will want his money soon, and so we propose to apply, and will apply to the Provincial Treasury to loan the balance, which will be composed of seven annual payments of $145.55 each, the first of which is to fall due in the year 1895. None of these transactions have appeared in the financial statements sent to your Bureau, for it is a separate account.

. . . I have been instructed by the reeve of this township to inform you, that as to any outstanding debentures by this township, the same is not considered as a liability any more than the county rate in each of the several years when they become due, and also that auditors' report is completed as per order of council. . . .

. . . At the date of making the audit the collection roll was, and is still, in the hands of the collector, with a balance uncollected, so it was impossible for the auditors, who get a very small remuneration, to make a proper return. . . .

. . . I got the statement of school debentures from Mr. ———, who has handled them from the first. He is treasurer of the school to which the debentures apply, and is the only party I know of in the township who knows anything about them. . . .

. . . The balance ($2,235.85), due from the treasurer to the municipality, is not deposited in any bank in a separate account, but is kept along with his own moneys.

There has been a tendency on the part of ratepayers to give in larger acreages of swamp and waste lands in order to lessen their assessment.

. . . I do not think I could furnish you with an accurate statement as to what would be principal and what would be interest on these debenture amounts each year. I have never seen any of them. . . .

As pathmasters do not all return road lists, cannot tell.

. . . The number of acres cleared is apparently less than last year. Reason is this: Many acres of cleared land, through neglect, grow up again with young timber rapidly in this country. . . The assessor adds such to "woodland."

From the data furnished by the present system of bookkeeping, or rather from the lack of system, we consider it is impossible to make the yearly investigation of the financial affairs of this municipality with such thoroughness as ought to be done.

After writing clerk the second time for correction we received the following reply:

I cannot suggest any explanation other than that I must have copied the total different from the original. Sorry to have caused trouble, but did not think you required an answer.

A town treasurer writes: An amendment to Sec. 283, allowing treasurers to make out the annual statement in cities and towns, similar to the powers given to the City of Toronto, would, I am sure, be well advised.

. . . We have a large floating population here, working in the saw mills. Some years they are entered on the assessment roll as tenants and M. F., at their own request, but this year they are not so entered—hence the difference. . . .

. . . Last winter the Legislative Assembly passed an Act allowing the town to consolidate its debentures for ten years. There is, therefore, no levy for sinking fund. . . .

I have searched the newspaper fyles to obtain the reports of the finance committee —[Special Auditor.]

On account of the expense the council decided not to print a detailed statement, similar to one sent you in 1892. That report was prepared by our treasurer during my time as chairman of finance, and is the only printed detailed statement issued during fifteen years.—[City of Guelph.]

My first report as special auditor was not printed. A synopsis was published, and I sent you a copy cut from the newspaper.—[Special Auditor.]

. . . As the auditors have neglected their work for other engagements, the audit has not yet been completed. . . .

. . . The increase is correct, and arises from the fact that the assessors are more particular now in distinguishing between "personal property" and "income" than they have hitherto been. . . .

. . . The public school debenture debt of Ottawa has never been included in the city auditors' reports, because the liabilities without the assets would be of little value, and we are not in a position to give the public school assets, the accounts of this institution being kept by the secretary of the school board, and the accounts audited by the public school auditors. . . .

. . . The $5,000 paid in 1891 was invested in our sinking fund, and another $5,000 was due and paid this year. And they were not included in the amount of school debentures, as they were issued by the school board and not by the corporation. [School boards are not authorized to issue debentures.]

. . . The treasurer explains that the cause of the difference between the auditors' and his statement is that the former give gross receipts and the latter net results.

. . . The sinking fund is made from money deposited by the collector annually, viz. 1 per cent. of the principal and the earned interest. The fund is in the hands of trustees and the city has no control over it.

. . . In my letter to you of April 13th, 1896, I am afraid I misunderstood you in reference to arrears due municipalities. I am in error there, I should have charged the townships with the whole county rate unpaid in item "Rates due from local municipalities" and have added all the arrears due in item "Due to municipalities for non-resident taxes collected." If desirable I will correct the statement if you send it to me, and make it read more in keeping with the facts.

. . . The Consolidated Municipal Act, 1892, section 263 (sub-section 2), directs that the copy of the accounts is to be forwarded to you "within one month" after the appointment of the auditors. If this time could be extended to two months the county would be pleased to send a printed copy instead of a written one, as a saving of $15—the price paid for making the copy—would be effected by such an arrangement.

. . . I may inform you that the county auditors do not make out any statement for the county council, but simply audit the statement made by myself. This is done by direction of the council to save paying the auditors more salary, and as they are not paid for it the auditors refuse to make out a detailed statement for your department, claiming that as they do not make it for the council, they are not compelled under the Act to make a copy for you. I have, therefore, done the best I could to send a printed copy.

. . . I can do nothing more in connection with our county's finances than what I have done to get you the statements you require. I have gone to our treasurer with every letter I received from you, and requested him to comply as far as in his power with your requests. I believe he failed to attend to these things as he should have done for some time. . . I am afraid we will have some trouble to get any further statements or reports from the auditors, as they look on their work as being done.—[Warden.]

From report of special auditor:

In the absence of data for the years 1891-2-3 we cannot vouch for the absolute correctness of these statements, as your treasurer could not produce anything in the way of vouchers, cheques, cheque stubs or in fact any papers or documents relating to the expenditures in those years, a state of affairs not very creditable to your corporation.

. . . . . .

. . . We had also to assume that the balance at credit of public schools as at Dec. 31st . . . was correct, although just how the municipality should be so far behind in its payments to the school without action being taken by the council or comment by previous creditors does not appear from any prior reports.

We would recommend the following:

1. A new set of books for the village dating from 1st January, 1895.

2. The continuance of the order system on the treasurer for every expenditure of money, same to be signed by the proper officials.

3. That every voucher for moneys expended be numbered and entered in consecutive order in the treasurer's cash book.

4. That the auditors have access to the assessor's and collector's rolls and all other documents as the law directs.

5. That proper accounts be opened in the ledger under the necessary heads so that the financial condition of the village can be ascertained at any time.

6. That in future the collector's roll be handed in summarized up to December 31st in each and every year.

7. That all cheques be made payable to the parties interested.

8. That all vouchers and documents of whatever nature affecting the corporation be preserved and fyled in proper order.

This is the most important and should be insisted on.

9. That the books of the village be closed on the 31st of December in each and every year, and that they be audited up to that time.

The following is from an aspirant for the position of auditor. At the time of writing he was a councillor for a northern township:

"I wont to no sumpthing a bout auditing township book dos each years taxes nead to be kept by them selvs or will It doo to make up the tresuers Book from the first of January until the first of January and alow Him what ever amount of taxes he sayes he Recived fom the past and presant year."

In our township all the statute labor is placed on the collector's roll at a specified rate per day. Each party on performing his statute labor receives from the pathmaster a certificate. This certificate the holder passes to the collector in lieu of the sum charged for statute labor, otherwise the collector must collect all amounts for statute labor for which certificates are not produced.

UNIVERSITY OF TORONTO.

AUDITOR'S REPORT

TO THE

BOARD OF TRUSTEES

ON

CAPITAL AND INCOME ACCOUNTS

FOR THE

YEAR ENDING 30TH JUNE, 1895.

(In Continuation of the Tables Given in the Appendices to a Report of the Committee of the Board on Capital and Income Accounts Adopted 8th November, 1893.)

ADOPTED 23RD OCTOBER, 1895.

TORONTO:
WARWICK BROS. & RUTTER, PRINTERS, ETC., 68 AND 70 FRONT ST. WEST
1895.

AUDITOR'S REPORT TO THE BOARD OF TRUSTEES

ON

CAPITAL AND INCOME ACCOUNTS

FOR THE

YEAR ENDING 30TH JUNE, 1895.

TORONTO, August 17th, 1895.

To the Trustees of the University of Toronto.

GENTLEMEN,—I submit herewith the 1894-5 financial statement duly audited. It conforms closely to the order adopted in previous years, but several Schedules are added to this Statement.

The workings of the Accounts appearing in Appendix No. 1 follow the printed Report of your Standing Committee on Finance, adopted on 14th December last, and the Revenue transactions have resulted quite as favorably as estimated therein.

The feature of the year is the large capital withdrawals from the Revenue Earning Assets. The portion $73,259.32 and interest, paid and to be paid, on account of the Upper Canada College Endowment, will not affect either Revenue or the General Endowments Fund for many years to come. It is otherwise with the expenditures upon buildings and equipment for the proper purposes of the University. To cover this loss of income the increase of various fees was authorized. The expenditures are:

Additions for the year 1894-5		$84,952 17
Unexpended portions of appropriation as per page 4 of your 1894-5 Report:		
Chemical Building	$ 152 45	
Equipment thereof	20,000 00	
Equipment of Museum	3,182 76	
		23,335 21
A total of		$108,287 38

During the past year Contingency Account has been charged with $2,930.05; this and the previous year's charge have reduced the Fund to the extent of about seventeen per cent. The volume of the investments which it was created to afford protection to, have, during the same period, been reduced by about twenty three per cent. Hence, though no additions have been made to the Fund, it is relatively stronger than it was on 30th June, 1893.

Appendix No. 2 is an account of the fees collected by the Registrar of the University, and Appendix No. 3 of the Medical Faculty Fees collected by the Secretary of that body. The labor was so divided for the first time this year in order to lighten the duties of the former officer. No doubt some relief has been afforded, but the Registrar is still unable to perform this portion of the work assigned to him, as he would desire to do it, and as it should be done.

The fees of the University and University College slightly exceed the estimate of your Standing Committee, but the arrears are larger in amount than those of the preceding year. The total fees of the Medical Faculty have fallen short of the estimates, and the unpaid portion of them is very large. The latter are returned in Appendix No. 3 as in arrear, but as the bulk are third year instruction fees, the time for payment of which is optional, that description is not strictly correct.

The Residence Accounts of University College for three years, covering the incumbency of the present Dean in Residence, have been submitted to audit, and the returns appear in Appendix 4. In order to bring the accounts to a close as of 30th June, 1895, unpaid accounts to the extent of $441.96 have been included among the expenditures of 1894-5; all other items in the return have been duly vouched for.

During the period covered by these returns, the Bursar has advanced $1,410.85:

1893-4 Plumbing reconstruction	$1,000 04
1894-5 Unusual repairs	410 81

of which $150 was charged to the Residence Accounts, and the remainder $1,260.85 you have covered by Supplementary Appropriations against the General Revenue Account.

The present accommodation is too limited to admit of favorable pecuniary results, but both ends of the account seem to meet when the Residence is fully occupied, and the intention is that it should be self supporting to this partial extent.

I have the honor to be, etc.,

W. H. CROSS,
Auditor.

APPENDIX 1.

Balance Sheet, 30th June, 1895.

Funds.

General Endowments Fund (Schedule 2)	$3,496,426 43
Specific Endowment Funds (Schedule 3)	75,737 59
Retirement Fund (Schedule 4*a*)	15,513 95
Trust Funds (Schedule 4*b*)	43,125 24
Revenue Reservations (Schedules 5)	52,408 05

Liabilities.

Upper Canada College (Schedule 4*c*)	39,000 00
Canadian Bank of Commerce	797 32
	$3,723,008 58

Assets.

Site Lands	Schedules 6	$475,361 40	
Buildings		785,310 24	
Equipment		173,558 57	
			$1,434,230 21
Unproductive Lands (Schedule 7)			1,019,827 91
Leased Lands (Schedule 8)			400,023 13
Investments (Schedule 9)			867,696 21
Past due Fees (Schedule 10)			1,231 12
			$3,723,008 58

SCHEDULE 2.

General Endowments Fund.

Licenses to front on Queen Street Avenue :		
R. Dinnis, *et al*, first instalment, lots one to five		$285 00
Library Equipment :		
Value of books, etc., actually added to Library as shown by Accession Catalogue on 30th June, 1895	$124,345 83	
Less on 30th June, 1894	118,142 07	
		6,203 76
Biological Museum :		
Expenditures from Capital since 5th May, 1893		2,345 60
School of Science Site :		
Capitalized value upon a basis of five per cent. of rental for 21 years from 1st May, 1891	$18,500 00	
Less amount of previous account	1 00	
		18,499 00
		$27,333 36
Less.		
Lots 9 and 17 in concession 8 Wolford, previously valued at	$1,000 00	
Sold for	700 00	
		300 00
Addition for 1894-5		$ 27,033 36
Fund of 30th June, 1894		3,469 393 07
Fund of 30th June, 1895		$3,496,426 43

SCHEDULE 3.

Specific Endowment Funds.

Scholarships.

Blake, Matriculation Scholarship	$19,104 99
Blake, Political Science	3,750 00
Moss, Classics	2,000 00
Daniel Wilson, Natural Sciences	2,000 00
William Mulock, Classics, Mathematics	2,000 00
Mary Mulock, Classics	2,058 74
George Brown, Modern Languages	1,128 34
George Brown, Medical Science	5,321 72
William Ramsay, Political Economy	1,009 42
Julius Rossin, German	1,000 00
Bankers' Political Science	1,200 00
John Macdonald, Philosophy	2,030 00
Physics	2,350 00
Prince of Wales' Prize, General Proficiency	950 00
Mackenzie Memorial	17,584 60
Fulton Bequest	3,291 30
Starr Bequest	4,113 46
Lyle Medal	137 30
Stewart Bequest	1,018 98
Young Memorial	3,018 74
	$76,737 59

Funds as per Schedule, 30th June, 1894	$69,196 24	
Interest appropriation	3,161 13	
Receipts during 1894-5	7,117 82	
	$79,475 19	
Scholarship payments 1894-5	3,737 60	
		75,737 59

SCHEDULE 4*a*.

RETIREMENT FUND.

Beneficiaries as on 30th June, 1895.

James Loudon	$2,044 85
R. Ramsay Wright	1,179 48
Maurice Hutton	1,179 48
W. J. Alexander	1,179 48
Alfred Baker	1,178 61
J. G. Hume	1,055 34
J. E. Berkeley Smith	827 71
J. F. McCurdy	731 82
James Mavor	568 62
Wm. Dale	522 44
A. B. Macallum	472 00
W. H. Fraser	472 00
J. Squair	472 00
W. J. Loudon	429 86
D. R. Keys	429 85
W. H. Pike	413 84
H. H. Langton	310 87
G. M. Wrong	303 86
W. S. Milner	195 01
J. H. Cameron	195 01
G. H. Needler	195 01
W. L. Miller	194 85
James Brebner	148 06
C. A. Chant	130 63
E. C. Jeffrey	130 63
D. W. McGee	130 63
A. T. DeLury	130 63
Aug. Kirschmann	105 40
J. C. McLennan	103 03
Adam Carruthers	82 95
	$15,513 95

SCHEDULE 4*b*.

TRUST FUNDS.

Residence Extension		$780 95
Vice-Chancellor's		232 88
Library, Insurance	$38,840 19	
Library, German Dept	312 10	
Library, French Dept	56 64	
		39,208 93

Museum Restoration Fund		$925 86
Biological Students' Supply Fund		326 44
Daniel Wilson Memorial		85 73
University College Ladies' Matron Fund		250 00
Medical Faculty Funds :—		
Surplus Account	$304 18	
Anatomical	307 81	
Pathological	439 90	
Sanitary Science	155 00	
Gynæcological	50 00	
Materia Medica	57 56	
		1,314 45
		$43,125 24
Retirement Fund		15,513 95
		$58,639 19
Funds as per Schedule 30th June, 1894	$59,666 55	
Appropriation of Interest thereon	1,451 85	
Receipts during 1894-5	17,516 16	
	$78,634 56	
Less payments during 1894-5	19,995 27	
		58,639 19

SCHEDULE 4*c*.

Upper Canada College Account.

Amount of share in King and Adelaide property, Toronto		$100,000 00
On 1st June, 1895, the value of this share having been determined at $73,234, the account runs :—		
Cash paid on 7th June, 1895. Principal	$34,234 00	
Interest from 1st to 7th June	25 32	
Amount to be paid with interest from 1st June	39,000 00	
Interest from 7th to 30th June upon above advance of $34,259.32, carried to revenue for 1894-5 account	97 41	
	$73,356 73	
Reserve to cover revenue against loss upon above $73,356 73 from year to year	26,643 27	
		$100,000 00

Upper Canada College Block.

Amount returned 30th June, 1894	$395,180 18	
Interest upon cash advances of $63,436 33, upon terms of Order-in-Council dated 18th August, 1892	2,926 63	
		$398,106 81
Less above named reserve to cover interest upon later advances		26,643 27
Account as on 30th June, 1895 (Schedule 7)		$371,763 54

SCHEDULE 5*a*.

Revenue Reservations.

Accrued Income unpaid on 30th June, 1892		$36,739 81
Contingent Fund :		
Loss, Geo. Turvey, loan	$1,256 48	
Loss, R. Baird, loan	980 64	
Loss, D. Campbell, loan	511 30	
Loss, J. & J. A. Bateman, loan	191 63	
	$2,940 05	
Less recovery from S. March, loss written off last year	10 00	
	$2,930 05	
Amount of fund 30th June, 1894	21,229 34	
Amount of fund 30th June, 1895		18,299 29
Revenue Account :		
Upper Canada College share of office expenses for two years written off	$1,890 49	
Shortage 1894-5 revenue	165 91	
	$2,056 40	
Amount of account 30th June, 1894	2,290 30	
Amount of account 30th June, 1895		233 90
		$55,273 00

Contra.

Payment on account of premiums on fire policies for a term of three years	$4,457 12	
Charge upon 1894-5 revenue	1,592 17	
Charge upon revenue 1895-7		2,864 95
		$52,408 05

SCHEDULE 5*b*.

Accrued Income.

Comparative Statement.	30th June, '94.	30th June, '95.
Mortgage Interest	$13,413 37	$12,355 83
Debenture Interest	4,318 80	4,960 24
Purchase money interest :		
Devonshire Place	497 70	361 05
Other sales	296 06	283 76
Agricultural fees	245 62	373 12
Other fees	150 00	858 00
City of Toronto	1,500 00	1,500 00
Toronto Ground rents	803 84	803 84
University Park rentals	4,093 75	4,093 75
School of Science rental	2,800 00	154 58
Provincial Board of Health	200 00	
Upper Canada College share of expenses	1,890 49	
	$30,209 63	$25,744 17

1892 AND 1895 COMPARED.

	30th June, '92.	30th June, '95.
Mortgage Interest:		
Past due	$5,812 01	$6,500 80
Accrued, but not yet due	11,262 29	12,355 83
Premium advance	262 70	225 44
Debenture Interest	9,993 81	5,142 15
Purchase money Interest	2,139 09	644 81
Rentals:		
City of Toronto	1,500 00	1,500 00
Business lands	640 00	1,358 42
Park lands	5,129 91	5,007 97
	$36,739 81	
Realizations on 30th June, 1895	4,004 39	
	$32,735 42	$32,735 42
Realizations as above	$4,004 39	
1894-5 fees outstanding	1,231 12	
	$2,773 27	

SCHEDULE 5c.

REVENUE, 1894-5.

Outlay.

Appropriations adopted 14th December, 1894		$113,532 33	
Appropriations adopted 14th December, 1894 as interest upon Special Funds		4,640 30	
Supplementary appropriations 30th June, 1895	$2,333 54		
Less unused of original appropriations	446 62	1,886 92	
			$120,059 55

Income.

Account.	Estimate.	Actual.	
Interest on purchase moneys	$2,411 36	$2,153 98	
Interest on loans	35,818 66	34,989 76	
Interest on debentures	12,941 88	12,157 26	
Rents, other than park	4,045 00	3,759 92	
Rents, University Park	8,637 50	8,795 20	
Medical Faculty	1,900 00	1,900 00	
Fees, University and College	43,500 00	43,748 75	
City of Toronto payment	6,000 00	6,000 00	
Transfer fees	50 00	43 50	
Interest on advance to Upper Canada College	2,926 63	3,024 04	
Sundry earnings, land	1,500 00	1,927 50	
School of Science ground rent	1,400 00	1,054 58	
Provincial Board of Health	200 00	200 00	
Interest on bank balances		132 60	
Unspecified donations		6 55	
	$121,331 03		
Allowed on capital withdrawn	2,800 00		
	$118,531 03	$119,893 64	$119,893 64
Deficit on 1894-5 transactions			$165 91

SCHEDULE 5*d*.

REVENUE EXPENDITURES, 1894-5.

	Original Appropriations.	Supplementary Appropriations.	Unused.
Salaries	$81,842 00	$527 82	
Pensions	1,000 00		
Examiners	7,250 00	189 86	
Convocation expenses	100 00	10 10	
Bursar's office	1,400 00	22 03	
Registrar's office	50 00	60 00	
University stationery	1,100 00	.....	64 76
University College stationery	100 00	.....	35 85
University printing	2,800 00	110 96	
University College printing	100 00	.....	3 45
University advertising	300 00	.....	2 35
University College advertising	75 00	.....	9 50
University incidentals	150 00	.....	17 80
University College incidentals	75 00	.....	18 50
General incidentals	400 00	.....	38 51
Law costs	700 00	.....	13 36
Interest on Special Trust Funds	4,640 30	.....	27 32
Telephones	150 00	.....	
Insurance	1,333 33	258 84	
Grounds	2,400 00	194 78	
Main Building	3,300 00	558 23	
Library Building	925 00	.....	78 82
Biological Building	1,710 00	.....	26 46
Gymnasium Building	700 00	48 55	
Library	2,600 00	86 34	
Residence Repairs	.....	260 81	
Chemical Department, maintenance	510 00	.....	13 74
Biological Department, maintenance	450 00	.....	28 73
Biological Department, students' supplies	807 00	.....	
Physiological Department	300 00	.....	7 93
Physical Department, maintenance	325 00	3 22	
Mineralogical and Geological Dept., maintenance	200 00	.....	19 72
Philosophical Department, maintenance	200 00		
Mathematical Department	110 00	.....	3 65
Classical Department	10 00	2 00	
French Department	17 00	.....	10 23
Italian and Spanish Department	20 00	.....	14 25
Oriental Department	23 00	.....	11 69
Original appropriations	$118,172 63		
Supplementary appropriations		$2,333 54	
Appropriations unused			$446 62

SCHEDULE 6a.

Site, Lands, Buildings and Contents.

30th June, 1895.

Land set apart for, and in use by, University		$475,361 40	
Main Building and residence		450,000 00	
Museum Building		73,085 42	
Biological Building		56,659 88	
Library Building		104,245 93	
Chemical Building		64,029 55	
Gymnasium Building		36,288 46	
Y. M. C. A. Hall		1 00	
South Lodge		1,000 00	
			$1,260,671 64
Library	$124,345 83		
Museum and Biological equipment	22,881 24		
Chemical apparatus	5,000 00		
Mineralogical and Geological apparatus	1,450 00		
Physical apparatus	11,735 00		
Psychological apparatus	1,502 50		
Mathematical apparatus	380 00		
			$167,294 57
Main Building furniture	4,268 00		
Residence furniture	1,996 00		
			6,264 00
			$1,434,230 21
Expenditure on Chemical Building		59,847 55	
Expenditure on Gymnasium Building		9,815 62	
Expenditure on Library	$8,546 37		
Less portion not added to catalogue	2,342 61		
		6,203 76	
Expenditure on Museum		2,345 60	
Museum cases and fittings		6,471 64	
Main Building furnishings		268 00	
Additions for 1894-5		84,952 17	
Return of 30th June, 1894		1,349,278 04	
			$1,434,230 21

SCHEDULE 6b.

Fire Insurance in Force 30th June, 1895.

Buildings and Equipment.

Items.	Property.	Amount.
1.	The Main Building and East Wing of the University of Toronto, and University College, Toronto, and known as the Main Building and East Wing	$200,000 00
2.	Contents thereof, viz.:	
	(*a*) Apparatus, instruments and chemicals	17,000 00
	(*b*) Furniture, fixtures and fittings, utensils and glass cases	1,500 00

3. Building of West Wing, adjoining on the north, known as the residence, divided into sections as follows :	
(*a*) That portion south of gateway	$3,700 00
(*b*) Contents thereof	250 00
(*c*) Block, including gateway	6,300 00
(*d*) Contents thereof	150 00
(*e*) Double house north of gateway	7,200 00
(*f*) Contents thereof	200 00
(*g*) Single house between double house and Dean's house	4,800 00
(*h*) Contents thereof	150 00
(*i*) Dean's house	11,000 00
(*j*) Contents thereof	50 00
(*k*) Dining hall, kitchen and Steward's department	27,000 00
(*l*) Contents thereof	400 00
4. Library Building, north wing	37,500 00
5. Contents thereof, viz.:	
Furniture, fixtures and fittings	2,500 00
6. Library Building, south wing adjoining, communicating by fire-proof doors	19,500 00
7. Contents thereof, viz.:	
Furniture, fixtures and fittings	500 00
8. Books in stack room and reading room of library building	77,200 00
9. Biological Laboratory and Museum Building, divided as follows :	
10. Section known as the Biological Department	37,000 00
11. Contents thereof, viz.:	
(*a*) Library	3,000 00
(*b*) Apparatus, furniture, fixtures and fittings	9,000 00
12. Section known as the Museum	25,000 00
13. Contents thereof, viz.:	
(*a*) Museum cases, furniture, fixtures and fittings	10,000 00
(*b*) Museum collection	10,000 00
14. Section known as the Medical and Geological department	20,000 00
15. Contents thereof, viz.:	
Apparatus, geological collection, furniture, fixtures and fittings	6,300 00
16. Chemical Laboratory Building	45,000 00
18. Gymnasium Building	15,000 00
19. Y. M. C. A. Building	5,500 00
20. Building known as the South Lodge	3,000 00
21. Two brick cottages lying west of Observatory	1,000 00
22. Large brick dwelling, including shed and verandah attached, lying west of the Chemical Laboratory Building, and known as the Cumberland house	5,000 00
	$611,700 00
Item No. 17 reserved for contents of Chemical Building when in position	15,000 00
Total	$626,700 00

Buildings upon Upper Canada College Block.

1. Bursar's office and residence	$3,000 00
2. Old master's dwellings. Nos. 1, 2, 3, 4. ($750 on each)	3,000 00
3. Old master's dwellings. Nos. 5 and 6. ($1,000 on each)	2,000 00
4. Old master's dwelling. No. 7	3,000 00
5. Old College Building, used as armory and drill shed	7,500 00
6. Janitor's dwelling	800 00
7. Tenement dwelling	800 00

8. Steward's dwelling, adjacent to mill	$ 800 00
9. Sheds and stables in rear of dwellings 1, 2, 3, 4	300 00
10. Sheds and stables in rear of dwellings 5, 6, 7	300 00
11. Mill	1,000 00
Total	$22,500 00

SCHEDULE 7.

Unproductive Lands.

Hoskin Avenue and Devonshire Place survey :		
Amount returned 30th June, 1894	$146,622 40	
Addition due to foreclosure of two sales	13,146 34	
	159,768 74	
Unsurveyed block between North Drive and Devonshire Place.	217,657 53	
Surveyed portion between North Drive and Devonshire Place, being lots Nos. 51, 52, 54, 69, 70, 71	91,273 50	
Unsurveyed block east of North Drive	90,351 00	
Lots Nos. 3, 6, 8, 9 and 22 north of College Avenue	70,029 00	
Upper Canada College block, King Street, Toronto	371,763 54	
Surveyed lots in Port Hope	7,100 00	
Surveyed lots near Belleville	1,990 00	
Indian Road property	9,741 60	
Farm lands	153 00	
		$1,019,827 91
Return 30th June, 1894	$1,031,398 21	
Foreclosed sales of Devonshire Place lots	13,146 34	
Interest on advances to Upper Canada College	2,926 63	
	$1,047,471 18	
Less.		
Reserve for future interest on amounts paid and to be paid to Upper Canada College trustees	$26,643 27	
Farm lands sold for $700, previously entered at	1,000 00	
	27,643 27	
		$1,019,827 91

SCHEDULE 8.

Leased Lands.

30th June, 1895.

Victoria College site	$ 1 00	
Wycliffe College site	2,500 00	
Observatory site	1 00	
School of Science site	18,500 00	
Lands leased to City of Toronto	120,000 00	
Park lands	166,180 00	
Cumberland residence building	13,074 74	
Toronto business property	69,600 00	
Caradoc farm	2,000 00	
		$392 156 74

Park ground rents :—		
Past due	$ 914 22	
Accrued, but not due	4,093 75	
City of Toronto payment	1,500 00	
Ground rents of business lands :—		
Past due	400 00	
Accrued, but not due	803 84	
School of Science rent :—		
Accrued, but not due	154 58	
		$7,866 39
		$400,023 13
Return 30th June, 1894	381,153 23	
Further payment on Cumberland house	88 80	
Increased valuation of School of Science site	18,499 00	
Increased park rentals, past due	127 52	
Accrued School of Science rent	154 58	
		$400,023 13

SCHEDULE 9.

Investments.

30th June, 1895.

Debentures and municipal bonds	$211,534 09	
Interest, past due	181 91	
Interest, accrued but not due	4,960 24	
Loans secured by first mortgages, real property	598,314 02	
Advanced as premiums on fire policies	225 44	
Interest, past due	6,500 80	
Interest, accrued but not due	12,355 83	
Unpaid purchase money on land sales	32,979 07	
Interest, accrued but not due :		
Devonshire Place sales	361 05	
Other sales	283 76	
		$867,696 21
Debentures paid off	$46,740 76	
Loans repaid	41,828 23	
Loans written off	2,930 05	
Sales foreclosed	13,146 34	
Payments on account of purchases	1,134 16	
Decreased interest accretions on sales	920 45	
	$106,699 99	
Less.		
Debenture re-investments	$49,172 42	
New loans granted	4,957 63	
Lands sold	700 00	
Increased debenture interest	1,682 91	
Increased mortgage interest	384 08	
	56,897 04	
Decrease in volume of investments	$49,802 95	
Return of 30th June, 1894	917,499 16	
		$867,696 21

SCHEDULE 10.

FEES IN ARREAR.

30th June, 1895.

Cash advances on behalf of Department of Agriculture	$223 12	
Agricultural fees	150 00	
		$373 12

Fees of 1893-4.

Outstanding on 30th June, 1895		110 00

Fees of 1894-5.

Faculty of Arts :—

College registration	$30 00	
Library	2 00	
Examination	85 00	
B. A. Degree	130 00	
M. A. Degree	20 00	
		267 00

Departmental :

Law, 6 Degrees	$120 00	
Dentistry, 17 Degrees	255 00	
Medicine, 10 Degrees	200 00	
Medicine, chemical supply	6 00	
		581 00
		$1,331 12

Contra.

Refund of double payment of Arts Degree fee	$10 00	
Refund to Medical Faculty of error in fourth year fee, 1893-4	5 00	
Collection on behalf of Medical Faculty after their accounts were closed	85 00	
		100 00
Arrears of 30th June, 1895		$1,231 12

APPENDIX 2.

Fees Received, 1894-5.

Faculty of Arts.

Subjects.	1st Year.	2nd Year.	3rd Year.	4th Year.	Other Receipts.
	$ c.	$ c.	$ c.	$ c.	$ c.
College fees	5,239 00	4,429 00	3,554 00	4,064 00	25 00
College penalties	31 00	35 00	19 00	31 00	.....
Matriculation	52 00	.....	.....	.....	46 00
Examination	2,260 00	2,475 00	1,995 00	2,010 00	1,560 00
Degrees	.....	.....	.....	1,460 00	450 00
Ad Eundem	6 00	6 00	.....	.....	6 00
Dispensation	16 00	8 00	16 00	6 00	104 00
Honor Certificate	.....	2 00	.....	4 00	27 00
Instruction:					
Medical Faculty	868 00	690 00	.....	.....	.....
Practical Science	871 00	393 00	111 50	.....	.....
Laboratory supply:					
Chemical	.....	63 00	60 00	10 00	.....
Mineralogical	.....	30 00	44 00	28 00	.....
Biological	80 00	137 00	200 00	240 00	.....
Physical	34 50	12 00	117 00	96 00	1 00
Psychological	.....	.....	28 00	48 00	.....
Library	390 00	364 00	318 00	336 00	6 00
Totals	9,847 50	8,644 00	6,462 50	8,333 00	2,225 00

Medical Faculty.

Subjects.	1st Year.	2nd Year.	3rd Year.	4th Year.	Other Receipts.
	$ c.	$ c.	$ c.	$ c.	$ c.
Matriculation	102 00	5 00	.....	.....	5 00
Examination	610 00	595 00	330 00	595 00	180 00
Degree	.....	.....	.....	960 00	140 00
Ad Eundem	6 00	6 00	6 00	.....	6 00
Chemistry	189 00	135 00	.....	.....	.....
Biology	96 00	124 75	.....	1 50	.....
Totals	1,003 00	865 75	336 00	1,556 50	331 00

Departmental.

Subjects.	L.D.S.	D.D.S.	C.E.	Music.	B. Paed.	Pharmacy
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Matriculation	75 00	320 00	.....	40 00	.....	195 00
Examination	180 00	480 00	55 00	195 00	40 00	210 00
Degree	260 00	270 00	150 00	.....	10 00	410 00
Practical Examination	.....	.....	.....	.....	.....	84 00
Totals	515 00	1,070 00	205 00	235 00	50 00	899 00

Summary of Receipts.

First year fees	$10,850 50	
Second year fees	9,509 75	
Third year fees	6,798 50	
Fourth year fees	9,889 50	
Miscellaneous receipts	2,556 00	
Law fees	515 00	
Engineering fees	205 00	
Dentistry fees	1,070 00	
Pharmacy fees	899 00	
Music fees	235 00	
Pedagogy fees	50 00	
Agricultural arrears	250 00	
Medical arrears	85 00	
		$42,913 25

Classification.

College fees	$17,311 00	
College penalties	116 00	
Matriculation	840 00	
Examination	13,770 00	
Degree	1,110 00	
Ad Eundem	42 00	
Dispensation	150 00	
Honor certificates	33 00	
Library	1,414 00	
Chemical supply	133 00	
Mineralogical supply	102 00	
Biological supply	657 00	
Physical supply	260 50	
Psychological supply	76 00	
Chemistry instruction	324 00	
Biological instruction	222 25	
Practical examination	84 00	
Arts instruction, Medical Faculty	1,558 00	
Arts instruction, School of Practical Science	1,375 50	
Agricultural arrears	250 00	
		42,828 25
Collection of Medical Faculty arrears	$540 00	
Less paid over	455 00	
		85 00
Total payments to Bursar		$42,913 25

Agricultural Fees.

Arrears of 30th June, 1894	$245 62	
Cash paid by Bursar to examiners on behalf of department	227 50	
15 degrees, B. S. A	150 00	
	633 12	
Payment by department	250 00	
Due by department, 30th June, 1895		$373 12

Arrears of 1893-4.

Amount outstanding on 30th June, 1894		$240 00
Collections thereon included in miscellaneous receipts	$86 00	
Written off as irrecoverable	44 00	
		130 00
		$110 00

1893-4, arrears on 30th June, 1895.

Arts degrees	$50 00	
Medical degree	20 00	
Law degree	40 00	
		110 00

1894-5, Fees in Arrear.

First year fees	$3 00	
Second year fees	3 00	
Third year fees	42 00	
Fourth year fees	705 00	
Post graduate fees	95 00	
		$848 00
Less degree fee twice paid		10 00
		$838 00

APPENDIX 3.

Medical Faculty Fees.

Year ending 30th June, 1895.

Registration.	Year.	Class Fees paid.	Class Fees unpaid.	Arts Faculty.	Dr. Clark.	Dental.
$ c.		$ c.	$ c.	$ c.	$ c.	$ c.
375 00	1st	3,982 00	220 00	868 00		
5 00	2nd	3,140 00	110 00	690 00		
5 00	3rd	2,882 00	2,295 00			
5 00	4th	5,097 00			295 00	740 00
390 00		15,101 00	2,625 00	1,558 00	295 00	740 00

Medical Faculty Fees Proper.

Year.	Total.	Arrears paid.	Earnings.	Estimate.
	$ c.	$ c.	$ c.	$ c.
1st	4,202 00	30 00	4,172 00	4,697 00
2nd	3,250 00		3,250 00	3,720 00
3rd	5,177 00	425 00	4,752 00	4,930 00
4th	5,097 00		5,097 00	5,355 00
Dental	740 00		740 00	710 00
Registration	390 00	15 00	375 00	385 00
Totals	18,856 00	470 00	18,386 00	19,797 00

Actual earnings		$18,386 00	
1894-5, fees in arrear	$2,625 00		
Earlier arrears paid	470 00		
		2,155 00	
Actual receipts, 1894-5, fees			$16,231 00

1894-5 Fees.

Registration	$ 390 00	
Class fees paid	15,101 00	
Class fees unpaid	2,625 00	
Arts Faculty	1,558 00	
Dr. Clark	295 00	
Dental	740 00	
		$20,709 00
Less.		
Arrears paid	$ 470 00	
Arts Faculty	1,558 00	
Dr. Clark	295 00	
		2,323 00
1894-5, fees		$18,386 00
1894-5, estimate		19,797 00
Deficit 1894-5		$1,411 00

Arrears.

Unpaid on 30th June, 1894	$1,225 00	
3 Registration fees earlier	15 00	
1 Anatomy fee earlier	30 00	
	$1,270 00	
Collections thereon during 1894 5	470 00	
	$800 00	
1894-5 arrears	$2,625 00	
Total arrears 30th June, 1895		$3,425 00
Since collected by Arts Faculty	$90 00	
6 Third Year instruction fees, 1893-4	510 00	
12 Materia Medica fees, 1893-4	180 00	
1 Anatomy fee, 1893-4	20 00	
4 First Year fees, 1894-5	220 00	
2 Second Year fees, 1894-5	110 00	
27 Third Year fees, 1894-5	2,295 00	
		3,425 00

APPENDIX 4.

University College.

Residence Accounts.

Income.

Account.	1892-3.	1893-4.	1894-5.
	$ c.	$ c.	$ c.
Rents	777 10	989 10	773 15
Board	2,919 74	3,805 15	3,230 05
Steward's sundries	249 05	207 69	196 85
Fuel	81 20	131 10	102 30
Detriments	12 10	78 65	12 00
Fines	96 45	61 25	41 00
Totals	4,135 64	5,272 94	4,355 35

Expenditures.

Account.	1892-3.	1893-4.	1894-5.
	$ c.	$ c.	$ c.
Provisions	2,304 85	2,900 94	2,369 19
Fuel	201 74	241 00	342 19
Gas	337 50	345 48	291 32
Maintenance and utensils	699 23	501 04	384 04
Laundry	39 99	63 36	36 11
Allowance to Dean	200 00	200 00	.....
Steward's wages	360 00	390 00	330 00
Other wages	483 46	600 43	553 98
Totals	4,626 77	5,242 25	4,306 83

Average number in residence.	Year.	Result.	—	—
			$ c.	$ c.
30	1892-3	Deficit	.....	491 13
39	1893-4	Surplus	30 69	.....
31	1894-5	Surplus	48 52	.....
				79 21
Deficit for three years			.....	411 92
Surplus on 30th June, 1892			.....	348 27
Deficit on 30th June, 1895			.....	63 65

The $4,306.83 appearing as expenditures for the year 1894-5 includes $441.96 due on 30th June, 1895, but not paid.

REPORT

OF THE

COMMISSIONERS ON THE DISCIPLINE

AND OTHER MATTERS

IN THE

UNIVERSITY OF TORONTO.

PRINTED BY ORDER OF THE LEGISLATIVE ASSEMBLY

TORONTO:
WARWICK BROS. & RUTTER, PRINTERS, &c., 68 & 70 FRONT STREET WEST.
1895.

(L.S.) GEORGE A. KIRKPATRICK,
Lieutenant-Governor.

PROVINCE OF ONTARIO.

VICTORIA, by the Grace of God, of the United Kingdom of Great Britain and Ireland, QUEEN, Defender of the Faith, etc., etc., etc.

To the Honorable Thomas Wardlaw Taylor, Chief Justice of our Province of Manitoba; John Juchereau Kingsmill, of our City of Toronto, Esquire, Barrister-at-Law; Edmund John Senkler, Esquire, Judge of the County Court of our County of Lincoln in our said Province of Ontario; Byron Moffatt Britton, of our City of Kingston in our said Province of Ontario, Esquire, B.A., one of our Counsel learned in the Law, and Professor John Campbell, of our City of Montreal in our Province of Quebec, M.A., LL.D., our Commissioners in this behalf.

GREETING:

O. MOWAT, Attorney-General. WHEREAS in and by chapter seventeen of the Revised Statutes of our Province of Ontario, entitled "An Act respecting Inquiries concerning Public Matters," it is enacted that whenever the Lieutenant-Governor of our said Province-in-Council deems it expedient to cause inquiry to be made into and concerning any matter connected with the good government of our said Province, or the conduct of any part of the public business thereof, or the administration of Justice therein, and such inquiry is not regulated by any special law, the Lieutenant-Governor may, by the Commission in the case, confer upon the Commissioners or persons by whom such inquiry is to be conducted, the power of summoning before them any party or witnesses, and of requiring them to give evidence on oath, orally or in writing (or on solemn affirmation if they be parties entitled to affirm in civil matters), and to produce such documents and things as such Commissioners deem requisite to the full investigation of the matters into which they are appointed to examine, and that the Commissioners shall then have the same power to enforce the attendance of such witnesses, and to compel them to give evidence and produce documents and things, as is vested in any Court in Civil Cases; but that no party or witness shall be compelled to answer any question by his answer to which he might render himself liable to criminal prosecution;

And whereas it has been made to appear to the Executive Government of our said Province that complaints have been made in respect of the discipline and exercise of authority by the Councils of the University of Toronto and University College, and in respect of the friction alleged to exist between the students and the said Councils, and in respect of the qualifications, conduct, teaching and efficiency of members of the Faculties of the University of Toronto and University College, and in respect of the powers of the various governing bodies of the University of Toronto and University College with regard to the students of the said University and College;

And whereas the Lieutenant-Governor of our said Province of Ontario in-Council deems it expedient that inquiry should be made into the said complaints;

Now know ye that we, having and reposing full trust and confidence in you the said Thomas Wardlaw Taylor, John Juchereau Kingsmill, Edmund John Senkler, Byron Moffatt Britton and John Campbell, do hereby by and with the

advice of our Executive Council of our said Province appoint you, the said Thomas Wardlaw Taylor, John Juchereau Kingsmill, Edmund John Senkler, Byron Moffatt Britton and John Campbell to be our Commissioners in this behalf to inquire into all complaints that may be submitted by any student, or by any person on behalf of any student, in respect to the discipline or exercise of authority by the Councils of the University of Toronto and University College, and into all causes that led to the friction alleged to exist between such students and the said Councils, and into all matters bearing thereon; also into the qualifications, conduct, teaching and efficiency of any member of the Faculties of the University of Toronto and University College against whom any charge or complaint may be laid before you, our said Commissioners, and to inquire into the respective powers of the various governing bodies of the University of Toronto and University College, and, so far as may be deemed necessary, into all matters bearing on the administration of such bodies since the date of the proclamation of the Revised Statutes of our Province of Ontario, chaptered two hundred and thirty, and entitled "An Act respecting the Federation of the University of Toronto and University College with other Universities and Colleges," including their dealing with the discipline of students and the various societies and associations of students, and to report to the Visitor of the University of Toronto and University College with all convenient speed the evidence respecting all these matters, together with such findings and recommendations as to our said Commissioners may seem just and proper.

Giving to you, our said Commissioners, full power and authority to summon before you any party or witness, and to require him, or them, to give evidence on oath, orally or in writing (or on solemn affirmation if such party or witnesses is or are entitled to affirm in civil matters), and to produce to you, our said Commissioners, such documents and things as you may deem requisite to the full investigation of the premises, together with all and every other power and authority in the said Act mentioned and authorized to be by us conferred on any Commissioner appointed by authority or in pursuance thereof;

And we do require you, our said Commissioners, forthwith after the conclusion of such inquiry, to make full report to our said Lieutenant-Governor touching the said investigation, together with all or any evidence taken by you concerning the same.

To have, hold and enjoy the said office and authority of Commissioners for and during the pleasure of our said Lieutenant-Governor;

And we do hereby appoint the said Thomas Wardlaw Taylor to be Chairman of this our said Commission.

In testimony whereof, we have caused these our Letters to be made Patent and the Great Seal of our said Province of Ontario to be hereunto affixed. Witness: The Honorable George Airey Kirkpatrick, member of our Privy Council for Canada and Lieutenant-Governor of our said Province of Ontario. At our Government House, in our City of Toronto, in our said Province, this sixth day of April, in the year of our Lord one thousand eight hundred and ninety-five, and in the fifty-eighth year of our Reign.

By command,

J. M. GIBSON,
Secretary.

COPY OF AN ORDER IN COUNCIL APPROVED BY HIS HONOR THE LIEUTENANT-GOVERNOR THE 6TH DAY OF APRIL, A.D. 1895.

The Committee of Council advise that in accordance with the provisions of Chapter 17 of the Revised Statutes of Ontario, 1887, entitled "An Act respecting Inquiries concerning Public Matters," a Commission be issued under the Great Seal of the Province of Ontario, addressed to the Honorable Thomas Wardlaw Taylor, Chief Justice of the Province of Manitoba; John Juchereau Kingsmill, of the City of Toronto, Esquire, Barrister-at-law; Edmund John Senkler, Esquire, Judge of the County Court of the County of Lincoln; Byron Moffatt Britton, of the City of Kingston, Esquire, one of Her Majesty's Counsel learned in the law, and John Campbell, of the City of Montreal, Esquire, M.A., LL.D., to inquire into all complaints that may be submitted by any student, or by any person on behalf of any student, in respect of the discipline or exercise of authority by the Councils of the University of Toronto and University College; and into all causes that led to the friction alleged to exist between such students and the said Councils, and into all matters bearing thereon; also into the qualifications, conduct, teaching and efficiency of any member of the Faculties of the University of Toronto and University College against whom any charge or complaint may be laid before them; and to inquire into the respective powers of the various governing bodies of the University of Toronto and University College with respect to the students of the said University and College, and so far as may be deemed necessary into all matters bearing on the administration of such bodies since the date of the proclamation of the University Act, 1887, R. S. O. Chap. 230, including their dealing with the discipline of students, and the various societies and associations of students, and to report to the Visitor of the University of Toronto and University College with all convenient speed the evidence respecting all these matters, together with such findings and recommendations as to them may seem just and proper, and that Your Honor by the said Commission confer upon the said Commissioners the powers authorized by the said Act.

The Committee further advise that the Honorable Thomas Wardlaw Taylor be appointed the Chairman of the said Commission.

Certified,

J. LONSDALE CAPREOL,
Asst. Clerk, Executive Council.

The Honorable the Provincial Secretary

REPORT

OF THE

UNIVERSITY COMMISSION

To the Honorable GEORGE AIREY KIRKPATRICK,
Lieutenant-Governor of the Province of Ontario,
Visitor of the University of Toronto and of University College :—

MAY IT PLEASE YOUR HONOR:

The Commissioners appointed by a Commission bearing date the 6th day of April, 1895, and directing them to inquire into all complaints that may be submitted by any student, or by any person on behalf of any student, in respect of the discipline or exercise of authority by the Councils of the University of Toronto and University College, and into all causes that led to the friction alleged to exist between such students and the said Council, and into all matters bearing thereon; also into the qualifications, conduct, teaching and efficiency of any member of the Faculties of the University of Toronto and University College against whom any charge or complaint may be laid; and to inquire into the respective powers of the various governing bodies of the University of Toronto and University College, with respect to the students of the said University and College, and so far as may be deemed necessary, into all matters bearing on the administration of such bodies since the date of the proclamation of the Revised Statute of the Province of Ontario, chaptered 230, and entitled "An Act respecting the Federation of the University of Toronto and University College with other Universities and Colleges," including their dealing with the discipline of students and the various societies and associations of students, and to report to the Visitor of the University of Toronto and University College, with all convenient speed, the evidence respecting all these matters, together with such findings and recommendations as might to them seem just and proper, have the honor to report.

1. The Commissioners met on the 8th day of April, 1895, at the Biological Department Buildings, and were attended by Mr. W. R. Riddell as Counsel, representing certain undergraduates of the University; by Mr S. H. Blake as Counsel, representing the University Council and University College Council, and by Mr. H. J. Scott as Counsel, representing certain Professors who might be affected by the proceedings. Evidence was taken under oath and reduced to writing by a sworn stenographer.

2. On the opening of the proceedings, Mr Riddell stated that he was prepared to lodge a complaint on behalf of a student who felt aggrieved by the exercise of discipline in his case by the University Council, and also a historical statement of the causes which, in the opinion of the students, have led to the friction alleged to exist between the Councils and the students, but that the students were not prepared to submit any complaints or charge against any individual Professor.

3. Thereupon the Commissioners directed that the complaint on behalf of the student feeling aggrieved, and the proposed historical statement, should be lodged and copies given to the Counsel representing the Councils and professors.

They also caused an advertisement to be inserted in several of the daily newspapers, namely, the *Globe*, the *Mail and Empire*, and the *World*, stating that they were prepared to proceed with the inquiry, and inviting any person who desired to lay before them any complaint or charge connected with the matters as to which they are directed to inquire, to do so. A copy of that advertisement (Exhibit A) is transmitted herewith.

4. In pursuance of the directions given, there was lodged a complaint on behalf of Mr. James Alexander Tucker, the student who had been suspended from lectures in the University and from all privileges of the University until otherwise ordered, setting out a statement of alleged facts, and submitting (1) that it was, under the circumstances, beyond the powers of the University Council in law to suspend him from lectures and the privileges of the University, and (2) that if the power existed, it had been unwisely and unfairly used against him. A copy of this complaint (Exhibit B) is transmitted herewith.

5. From the evidence taken, it appears that there is a paper known as the *Varsity* published weekly during a part of each year. It is the property of the students, and is issued under the superintendence of an Editorial Board and Business Board, on each of which the Literary and Scientific Society of University College, the Women's Literary Society and the School of Practical Science, are represented. In the autumn of 1894 Mr. Tucker was the Editor in Chief, and in December of that year he was succeeded as Editor by Mr. Montgomery. In the issues of that periodical between the 11th of October, 1894, and the 16th of January, 1895, various articles appeared, which were considered by members of the University Council to contain grave charges relating to the appointment of certain members of the teaching staff, their qualifications for the positions held by them, and reflecting upon the action of the Councils in regard to certain matters with which they had to deal. These articles were, in the opinion of members of the Council, expressed in language which was offensive, and likely to foster a spirit of insubordination among the students. On the 18th of January, 1895, the University Council met to consider what action should be taken in connection with an article which had appeared in the *Varsity* of the 16th of January, when the following resolution was passed: "That the President be requested to "call the editor before him and inform him that the Council requires that an "apology, satisfactory to the President, shall be inserted in the next issue of the "paper for the article published this week (pp. 104-5), and also that the President "shall be requested to instruct the editor that unless an apology is made, all "privileges of the paper arising from its connection with the University will be "withdrawn, and that on the publication of any similar objectionable articles in "future, the Council has decided to at once expel the editor."

6. The President of the University then had an interview with Mr. Montgomery, the editor of *Varsity*, who prepared and submitted an apology with which the President was satisfied, and which he required should, in pursuance of the terms of the Council's resolution, be published in the next issue of the *Varsity*. Upon the editor submitting this apology to the Editorial Board of the *Varsity*, they refused to permit the publication of it, or of any other apology, in the columns of that paper, and Mr. Montgomery resigned the position of editor. Thereupon Mr. Tucker was chosen as editor in his place, accepting the position, as he stated in his evidence, on the distinct understanding that there should be no apology, and prepared to take the consequences. Previous to that, on the

22nd of January, a mass meeting of students had been held, when a resolution was passed that no apology should appear in the *Varsity*.

7. The next issue of the *Varsity* on the 26th of January, appearing without an apology, the University Council again met on the 29th of January, Mr. Tucker being present, when four questions were put to, and answered by him—the questions and answers as they appear in the minutes of the Council being: "(1) "Were you Editor in Chief of the *Varsity* for the issue of the 26th instant? A. I "was. (2) Did you understand that the Council required a satisfactory apology "to be inserted in the issue of the paper next following the issue of January the 16th "containing an article objectionable to the Council? A. I understood. (3) Have "you any explanation to offer? A. At the mass meeting held on the 22nd "instant, a resolution was adopted, that no apology should appear in the *Varsity* "except for any erroneous statements which might have been made. That at a "meeting of the Editorial Board held on Thursday last the apology sent to the "Council by Mr. Montgomery had been considered, and that a resolution had been "passed refusing to publish the apology. (4) Did you write the letter in the "*Mail* of January the 23rd, '95, signed James A. Tucker (class of '95)? A. I did, "I wrote it on January the 10th. Before he withdrew, Mr. Tucker made the "additional statement: That the Editorial Board desired to take a strong stand "upon the right to criticize in a candid way the action of the University authori-"ties, and it was with that in view that I was appointed as Editor in Chief. "That they had refused to publish Mr. Montgomery's apology because it was too "broad." On his examination before the Commissioners Mr. Tucker stated that the questions and answers are correctly given in the minutes of the Council, except that his answer to the second question was: "I was, but not through any official "intimation."

At that meeting of the Council the following resolution was passed:—

"In view of the decision of the Council of January the 18th, requiring the "Editor of the *Varsity* to insert in the next following issue of the paper a satis-"factory apology for an objectionable article published in the issue of January "the 16th, and in view of the fact that the editor of the paper, J. A. Tucker, has "not published the apology in question as required by the decision of the Council, "resolved, that he be suspended from lectures in the University, and from all "privileges of the University, until otherwise ordered by the Council."

8. At a meeting of the University College Council held on the 19th of March, 1895, the President informed the Council of the final decision of the University Council with respect to Mr. Tucker, and thereupon the following resolution was adopted: "That in view of the suspension by the University Council of Mr J. A. "Tucker, editor of *Varsity*, for refusing to publish in that paper, after being "required to do so by the University Council, a satisfactory apology for an attack "on the University Council which appeared in the issue of *Varsity* of January "the 16th, 1895, this Council resolves that Mr. Tucker be suspended, until other-"wise ordered."

9. The Commissioners are of opinion that while considerable latitude should be allowed to the students in carrying on their paper, and in discussing matters connected with the University and its affairs, the articles complained of were offensive, and entirely beyond the line of fair comment upon the matters with which they professed to deal. Also that Mr Tucker, although not the writer of some of those articles, accepting the editorship at the time he did on the understanding that there should be no apology, and stating as he did when examined as a witness, that he approved of the language used in those articles, could stand in no better position than Mr. Montgomery, the Editor, at the time of their publica-

tion. The claim made that he was the only person qualified according to the Constitution of the *Varsity* to act as Editor in Chief, so that had he not accepted the position, the result would have been that the students' organ must either have gone out of existence, or been carried on in defiance of the Constitution, was entirely displaced by a reference to that Constitution.

10. The Commissioners find that under the various statutes of the province relating to the University of Toronto and University College, and in virtue of the authority and powers inherent in these bodies as Academic Institutions the University Council and University College Council were within their jurisdiction in dealing with the case of Mr. Tucker as they did. They are, however, of opinion that the course of the Council would have been more consistent had they, instead of suspending Mr. Tucker, acted on the first resolution, and on the failure to publish the apology, withdrawn all the privileges of the paper arising from its connection with the University.

11. The Historical Statement lodged with the Commissioners, was a lengthy narrative of events alleged to have occurred in, and to have been connected with the University of Toronto from the early part of November, 1894, down to the end of February, 1895. A copy of it (Exhibit C) is transmitted herewith.

That document concluded by saying: "But back of all this is the sentiment "which the President of the University has inspired in the students towards "him. The sentiment referred to as inspired by President Loudon, is a feeling "that President Loudon is unworthy of belief, that no confidence can be placed "in the truth of his statements, and further that in approaching him the student "feels that he is approaching one who is lying in wait to entrap him, and not one "who is desirous of assisting the student in his difficulties, or smoothing over mat-"ters of irritation, to one who is more anxious arbitrarily to exercise authority "than to remove causes of complaint. Never once, so far as is known to the "members of the Political Science Club, has President Loudon made an effort to "reconcile the Council with the Club, or the members thereof. In connection "with this also, and as one of the causes of the friction, must be considered the "charges made by Professor Dale in his letter to the Toronto *Globe* above referred "to, and it is believed that the Council were also to a certain extent incensed at "articles which had appeared at various times in the *Varsity*. The causes, it is "submitted, which led to the present state of friction between the Councils and "the students, are as follows:—

"(1) The facts alleged in the issues of the *Varsity* of date October the 17th, "October the 31st, November the 7th, and November the 28th, 1894. (2) The "publication of such facts in the *Varsity*. (3) The unwise action of the Council "in reference to the programme of addresses of the Political Science Club. (4) "The unconciliatory manner and actions of the gentleman (President Loudon) "entrusted by the Councils with communicating to the students the resolutions "of the Council. (5) The unwise and unlawful attempt by the Councils to inter-"fere with the criticism on the part of the *Varsity*. (6) Threats of suppression "of the *Varsity*, and threats of expulsion of the editor. (7) The attempt to render "Mr. Tucker responsible for Mr. Montgomery's articles, and to force him to print "an apology which it was neither his duty nor in his power to do. (8) The "uncalled for suspension of Mr. Tucker. (9) Articles printed in the Toronto "papers written or inspired by members of the University Council attacking Pro-"fessor Dale. (10) The facts alleged in Professor Dale's letter to the *Globe* of the "9th of February. (11) The summary dismissal of Professor Dale. (12) The "refusal on the part of the University Council to reinstate Mr Tucker. (13) "Want of confidence on the part of the students in President Loudon as herein-"before referred to."

12. The evidence taken by the Commissioners has established that a good deal of friction between the Councils and the students has existed for some time past.

The alleged causes arising out of interference with the criticism on the part of the *Varsity* and the dealing with Mr. Tucker by the University Council, have been practically disposed of before, under the head of his complaint against the action of the Council.

There was no proof of any articles having been printed in the Toronto papers written or inspired by members of the University Council attacking Professor Dale.

13. The statements made in the letter of Professor Dale to the *Globe* of 9th February were not properly facts, they were mere assertions. While no doubt the dismissal of that gentleman caused great excitement among the students, and led to no small part of the trouble which occurred, it must be remembered that this was the act of the Government, and it is impossible to see how any other course could have been pursued towards him.

14. As the conduct of the Chancellor of the University has been attacked in this connection, the Commissioners have deemed it proper to deal with the matter somewhat in detail. The letter of Professor Dale, was, in the first instance, sent for publication signed only "A Graduate," but upon the newspaper refusing to publish it as an anonymous letter, he signed his name to it. It appeared in the daily *Globe* newspaper on the 9th of February 1895, and contained the following language with reference to a letter which had previously appeared in the same paper and written by Mr. Walker, one of the Board of Trustees: "How can Mr. "Walker happen to know that the Hon. Edward Blake never approached any "member of the Government in connection with his son-in-law's appointment? "How can he know that Mr. Wrong's friend, one of the Professors of the Univer-"sity, was not approached by some one in the same connection? How does it "happen as a result of the suggestion of this friend Mr. Wrong was enabled to "obtain such favorable consideration at the hands of the Government? Is it not "a much more plausible theory of an appointment which outraged the feelings "both of the staff and of the students, that it was brought about—no one, of "course, can tell how—by the influence of the Chancellor?"

When examined as a witness before the Commissioners after some questions had been put and answered with reference to statements in the letter about the appointment of Professor Wrong—questions were asked and answered as follows:—

"Q. Again there seems to be a suggestion that this was brought about by "the influence of the Chancellor: that is the Hon. Edward Blake. What founda-"tion is there for that statement? A. Of course the first foundation would be "that the irregularity in the case would naturally lead to that inference; that "might be almost a sufficient reason simply the relationship existing between "Mr. Wrong and the Chancellor; at the same time I had other reasons for the "statement.

"Q. And those other reasons were? A. The information which I received "from a member of the cabinet, which I think justified the belief—from a member "of the Ontario Government.

"Q. And what was that? A. That Mr. Blake had mentioned the applica-"tion of Mr. Wrong for the position to him."

It further appeared that the member of the Ontario Government referred to was the Hon. Mr. Harcourt, the Treasurer of the Province. That gentleman was examined as a witness and stated, that while acting as Minister of Education, he

had a conversation with Mr. Dale, an old College friend, in which University matters were discussed. He stated that when speaking of certain matters: "I "gathered from his manner, from what he said, that he thought that Mr. Blake "perhaps had interfered with these appointments. He did not say that he had. "Mr. Dale never said that to me, that Mr. Blake had interfered, or that he knew "that he interfered. I wished to disabuse his mind of any such notion as to this "particular appointment of Professor Wrong. I stated to Mr. Dale then that I "had only once overheard the Chancellor mention the name of his son-in-law, and "on that occasion the reference to it was parenthetical, it was an interjection. "What he said, he said speaking even more rapidly than he ordinarily does, and "he said, as to that matter, speaking of the History appointment, we had been "discussing two or three other matters, the Chancellor and myself—I was then "acting Minister of Education—he said, 'As to that I can say nothing, as Mr. "Wrong is my son-in-law.' His manner of speech forbade my saying a word, and "I did not say a word, had not time to if I wished, and in justice to the Chancellor "who is absent, I want very strongly to say this, that what he did say was said by "way of interjection, and that he himself forbade me speaking of it at all. Now "I had better say how I came to see Mr. Blake. I saw Mr. Blake in his own "office, with a view of settling one or two matters. This is some time ago, it will "be remembered, and I could not be expected definitely as to date and as to words, "to recall it all; but the one matter related to Dr. Kirschimann or Prof. Kirschimann, "I do not know what his title is; the other matter related to Mr. McEvoy. Those "were the main matters discussed. The interview closed with my undertaking "to correspond with Dr. Kirschimann, which I did: it closed with his undertaking "to come to some understanding with McEvoy, and with that matter I had "nothing else to do thereafter. This matter then came up only incidentally and "it was hurriedly, as I say, disposed of in just those words to which I have "alluded."

15. The Commissioners find that there is no foundation for any charge, or even suspicion, that the Chancellor, Hon. Edward Blake, used his influence to have the appointment of Professor Wrong made, or that he in any way interfered about it. Also, that there was nothing said by Hon. Mr. Harcourt to Mr. Dale which could in the slightest degree justify the statement that he had, as a reason for saying the appointment of Professor Wrong was brought about by the influence of the Chancellor, information which he received from a member of the Government.

16. The action of the Council in reference to the programme of addresses of the Political Science Club had also a good deal to do with the friction and trouble which existed. That Club was formed last autumn among the students in the department of Political Science, was numerically strong, and had Professor Mavor as its honorary president. At a meeting of the Executive Committee held on the 7th of November, 1894, a programme of the meetings of the Club during the winter was prepared and written down by Professor Mavor. At that meeting it was proposed, by a member of the Club, that one meeting should be devoted to the subject of labor, and that two men, Messrs. Jury and Thompson, who had devoted considerable attention to that subject, should be asked to address the Club at that meeting. To this proposal Professor Mavor made no opposition, but knowing that some years before, when Mr. Jury had addressed, or been expected to address, a then existing Political Science Association in the University, objection had been taken to his doing so, he warned the members of the Committee that there might be opposition again, saying at the same time, that the proposal possibly could be carried out, provided it were kept quiet. By indiscretion on the part of some one, it was the next day, or within a few days after, announced

in a newspaper in the city of Toronto, that Messrs. Jury and Thompson were to address the Club. At the next meeting of the Committee, Professor Mavor said to them, that in consequence of this public announcement, what was before difficult had now become well nigh impracticable, according to some members of the Club, or as Professor Mavor remembers the statement, "now impossible." In the meantime, a copy of the programme containing the names of Messrs. Jury and Thompson had been sent to President Loudon to be laid before the Council. That the programme of a society or association, such as the Club, should be laid before the Council, does not seem to have been required by any written rule or regulation which can now be produced. It was said, that to do so was at one time imperative, but it was admitted that none has been laid before the Council since the great fire, and it may be for some time even before then. But be that as it may, there can, from the evidence, be no doubt that the Committee of the Club expected and understood that this particular programme was to be laid before the Council. At this second meeting, the question of having Messrs. Jury and Thompson address the Club was again discussed, and while the members of the Club no doubt expressed a strong desire to hear them, Professor Mavor received the impression that he was authorized to strike out their names from the programme, and he accordingly did so before it was presented to the Council. The programme does not seem to have been formally submitted to the Council for approval or approved of, but in the minutes of a meeting held on the 19th of November there is an entry that the secretary of the Political Science Club wrote submitting a programme for the season, and asking for the use of some one room in University College for the regular meetings of the Club and of the Hall in the Gymnasium for their public meetings. The first request was granted, and the second referred to the joint Committee on the Gymnasium for action. The programme then before the Council did not contain the names of Messrs. Jury and Thompson. As the opening meeting of the Club was to be held on the 28th of November, and to be addressed by Professor Mavor, the Honorary President of the Club, it was desired to have a printed programme for the season ready by that time. At the second meeting of the Committee, Professor Mavor distinctly stated that a proof of this programme must be shown to him before it was struck off and issued. It was placed in the printer's hands without the two names in question, but after Mr. Greenwood, the President of the Club, knew from Professor Mavor that the Council had passed it without them, and subsequently, on his saying that the Club was bound to hear these men, receiving from Professor Mavor the reply that he was afraid they would have to go down town to hear them, Mr. Greenwood added the names to the copy in the printer's hands. No proof was ever shown to Professor Mavor, who for the first time saw the programme when about to begin his lecture to the club on the 28th of November, about 100 copies having then been distributed. It is sought to excuse the not showing a proof to Professor Mavor on the ground that the printer did not send it until about 1 o'clock on the afternoon of the 28th, the programme itself having then to be struck off before 4 o'clock. It is, however, plain from the evidence that the copy had been for some days in the printer's hands and that no such effort was made to urge him on as might have been made, and which would have secured a proof in time for its having been shown, as promised, to Professor Mavor. In consequence of this breach of faith, as he regarded it, and as he was justified in regarding it, Professor Mavor resigned the Honorary Presidency of the Club. Following upon this, letters were written by the Club to the Council and considered by that body, the result being that the approval of the Council to the programme, which had been given, was revoked. In connection with this, an attempt was made to show

that the Council acted for an entirely different reason from that which they gave. No doubt, objection existed to Messrs. Jury and Thompson being permitted to lecture in the University on the ground of the religious opinions, of at all events the first named; and members of the Council, while not themselves taking any such ground, felt that they must respect the scruples and feelings of a large and influential number of those who are supporters of the University, or connected with affiliated institutions; but there is no doubt upon the evidence, that the final action of the Council with reference to the programme of the Political Science Club was really based upon the reason assigned, that one programme having been approved of, the club had printed and issued a different one, as the members of the Council believed, in opposition to, and in defiance of their authority.

17. During this dispute between the Council and the Political Science Club, the members of the latter seem to have put forward the wholly untenable claim that they had the right to select outside lecturers to deliver lectures and addresses within the University, and to do so while the statute expressly provides that no lecturing or teaching of any kind shall be carried on in the University by any others except the duly appointed professors and teachers, without the authority of the University Council.

18. Having dealt with the preceding matters, it may not be out of place to refer more particularly to the provisions of the statute.

By the second section of chapter 230 of R. S. O. (1887) it is enacted that "The University of Toronto shall continue to be a body corporate, with power to "hold any real property assigned to it under the provisions of any former Act or of "this Act, and with such other powers and privileges as are conferred upon it by "those portions of the charter remaining in force, which were granted in the eighth "year of the reign of His late Majesty, King George the Fourth, or by any former "Act, but such powers shall be exercised in accordance with the provisions of this "Act.

"(2) The Chancellor and Vice-Chancellor, and the Senate and all officers, and "all existing appointments, statutes, rules and regulations affecting such Univer-"sity, shall continue, subject to the provisions of this Act."

By the 68th section it is enacted that "The Collegiate Institution heretofore "constituted at the City of Toronto by the name of 'University College,' is hereby "continued, and the body corporate called 'The Council of University College,' and "the President, Professors, officers, servants and all other existing appointments, "and all statutes, by-laws, rules and regulations of such Council are hereby con-"tinued, subject to the provisions of the Act."

By the 56th section it is enacted that "The University Council shall consist "of a President, appointed by the Lieutenant-Governor in Council (who shall also "be President of University College) and of the Professors of the University; and "such Council shall have full authority and entire responsibility of discipline over "all students in relation to the lectures and other instruction by the Professors, "lecturers and other teachers of the University, and no lecturing or teaching of "any kind shall be carried on in the University or in the School of Science by any "others except the duly appointed professors and teachers, without the authority, "of the University Council."

By the 57th section it is enacted that "The University Council shall have "entire authority and responsibility for all work carried on by societies and "associations of students of the University, provided always that all such authority "and responsibility shall be limited to the conduct of the students in relation to "such societies and associations as are organized in connection with the Univer-"sity."

By force of the two sections just quoted, *i.e.*, the 2nd and the 68th, the respective powers of the University and of University College are fully preserved, except so far as altered by the Revised Statute, and the only alteration to be found is what is made by sections 56 and 57.

The effect of these last named sections is to vest in the University Council the powers named in them, and if any of these had previously been vested in the council of University College, they have ceased to be so vested.

No mode is pointed out in which the authority given by these sections is to be carried into execution, and no express authority to pass statutes or regulations is given, and it would appear that the authority can be exercised directly without any such statutes or regulations being passed.

It is clear that under the last clause of section 56, the persons engaged by the Political Science Club to deliver lectures in this University must be duly appointed professors or teachers of the University, or must have the authority of the University Council.

It is also clear that the *Varsity* is a paper issued by a society or association of students of the University organized in connection with the University, and fairly comes under the term "work carried on" used in that section, and consequently the University Council has entire authority and responsibility for it.

These considerations show that the conduct of the students both in printing the programme without the authority of the University Council, and in refusing to publish the apology demanded in the *Varsity*, was contumacious and inconsistent with their duty under sections 56 and 57.

19. It is worthy of note that while charges have been made against Professor Mavor, and as to his treatment of the students in connection with the programme of the Political Science Club, yet when he, in consequence of the disagreement, resigned the Honorary Presidency, he was earnestly requested by the club to withdraw his resignation and continue holding that office.

20. As to the allegations in the Historical statement respecting President London, the evidence leaves no doubt that a widespread feeling of dissatisfaction exists among the students, and evidence was offered to show that many of them regard him, or profess to regard him, as unworthy of confidence and unworthy of belief. When, however, they came in their evidence to assign reasons for entertaining such opinions of the President, they completely failed to show any justification for their alleged belief.

21. In attempting to justify their position they relied upon several things which were also spoken of by witnesses as causes of the alleged friction. One of these is what has been called the Shed trouble. A shed which had been put up in connection with the repairs to the main building after the fire, was not removed when the repairs were finished because there was stored in it a quantity of builders' plant and material to be used in the erection of the Chemical Laboratory next spring. This shed was torn down and destroyed one evening, a proceeding for which several students were fined by the Council. They claim that in tearing down this shed they were, if not invited to do so by the President, at least carrying out his wishes. Even upon their own showing all that he said about this shed was that it was an eyesore, certainly nothing to warrant the tearing down of the shed and the consequent exposure of the property it contained, occasioning a loss to the University of at least two hundred dollars.

22. It is also alleged that at an interview with Mr Montgomery over the *Varsity* trouble, President London said that the Council had determined to suppress *Varsity* but afterwards at an interview with Mr Tucker, Mr Greenwood

and another, he denied having done so. No evidence has been adduced to show that he did make any such statement to Mr. Montgomery. His own account of what passed then (Mr. Montgomery was not called) is that when the resolution of the Council as to privileges being withdrawn was referred to by him, Mr. Montgomery replied that that amounted to the suppression of *Varsity*. The President affirms that this was the first occasion in which the word suppression was used, and although he may then have spoken of the suppression of privileges, he did not speak of the suppression of *Varsity*. There is no evidence that he did so.

23. It is also said in connection with the refusal to allow the programme of the Political Science Club with the names of Jury and Thompson upon it, that President Loudon said that he was personally opposed to having Mr. Jury, and said "If for no other reason, because he was an active politician, a notorious Grit "and agitator, and for the same reason he would object to Sir Richard Cartwright "lecturing in the halls," and that when President Loudon was subsequently asked by a reporter of the *Empire* whether he had made this statement, he denied having done so and said the statement was absurd and untrue.

Professor Dale when first called as a witness stated that the President did make the above statement almost in the words given, and from his evidence then given it would appear as if the statement was not qualified in any way by any other statement made at the same time. When, however, Professor Dale was recalled two days afterwards he corrected his former statement and said, "With "regard to the statement of the President that he would not allow Jury or Sir "Richard Cartwright to speak, I would say that he said he would not allow any "prominent man of the Conservative party either to lecture." Professor Dale made this correction of his own motion and voluntarily.

This correction completely changes the character of the statement imputed to the President and shews that his objection was to allow strong partizans to lecture no matter what their political faith, whereas as the statement was originally made it appeared that his objection was to partizans who belonged to the Grit party, and the statement was published in the *Star* of 23rd January, 1895, almost in the words given above, under the heading "Jury is a Grit" "For that reason I object, says President Loudon."

Charles J. Long, the reporter who interviewed President Loudon, swore that he asked him if the reason stated in the *Star* was correct—he was not sure whether he mentioned the *Star*—but it was in consequence of the article in the *Star* that he interviewed him and he had it in his mind when he spoke to him. President Loudon's answer was that he had heard they were all Grits up there; and he said the statement was absurd and untrue.

Upon this state of facts there can be no doubt that President Loudon's answer to the reporter was quite correct and true. He is shown to have made a statement that he would not allow any strong political partizan to lecture—he is inaccurately reported to have said that he would not allow a partizan of one side to lecture, apparently because he belonged to that party, and when asked if that was the case he denied it.

The Commissioners must find that this charge of untruthfulness entirely fails.

24. Another matter brought forward was, what was spoken of as the Gymnasium trouble. It appears that a building was erected containing the Gymnasium proper for athletic purposes, a hall for larger meetings of student societies, and other rooms for smaller meetings. This hall and other rooms are known as the

students' union. The students claim that they contributed about $9,000 towards the cost of this building; the authorities on the other hand allege that while the building cost $30,000 the amount contributed by the students from themselves and subscriptions secured by them, was $1,750 only. In connection with this building the Athletic Association, a club having members connected not only with University College, but with Victoria College, the School of Practical Science, and other affiliated institutions, made a claim to be entitled to exercise control over it; and that other societies desiring the use of the hall or rooms in the students' union should apply to the association for permission to do so. Some of the societies were willing to have the association exercise such control, but individual members were opposed to that. There is some dispute as to whether the association claimed to be entitled to the absolute control, or only that they should have the immediate control under the Council.

But in taking the stand the authorities did, refusing such control and deciding that the allocation of accommodation to student societies should be made annually by a joint standing committee of the Councils, they were clearly within their right, the statute declaring that the property shall be deemed in the legal possession and under their control. No other course of dealing with the building could properly conserve the rights and interests of all the societies and associations concerned, and prevent jealousies and strife among them.

25. A consideration of the evidence, oral and documentary, which has been placed before the Commissioners leads them to believe, that some, at least, of the late troubles might have been avoided, had the authorities and the students been in closer contact, and with a stronger feeling of sympathy between them. It seems evident that there was a want of tact in dealing with the students at certain points during these troubles. At the same time President Loudon has been unnecessarily suspected of, and indeed charged with, arbitrary conduct, where the acts complained of were those of the Council, and he was only its representative, and in carrying out its decisions as its official head, brought more closely in contact with the students than the other members of the Council were.

26. The Commissioners further deem it their duty to express the opinion they have formed, based upon the evidence given by the students themselves, and the views by them freely expressed from the witness stand, viz., that in the past there has existed on the part of the students, to say the least of it, a misconception as to the scope and proper construction of the statutes regulating discipline in the University, and the real position the students should, and do, occupy with reference to the Councils of the University and College, and the degree of obedience that they are bound to render to the regulations of the University authorities.

27. Some days after the Commissioners had begun their work there were lodged with them charges against President Loudon, Professor Mavor and Professor Vander-Smissen. These charges were preferred by an undergraduate, whose name was given to the Commissioners, who was not examined as a witness, nor was his name mentioned in connection with any of the other complaints or charges laid before the Commissioners.

The charges so laid were accompanied by a list of the witnesses who could be called upon each charge. The lists of witnesses in the cases of President Loudon and Professor Vander-Smissen set out the various matters in respect of which the several witnesses would be called.

The Commissioners after considering the charges so made, held (1) that those against Professor Mavor were too vague and indefinite to be proceeded upon, and that they must be made more specific. (2) That the charges against President

Loudon and Professor Vander-Smissen were also too vague and indefinite, but that the particulars given with the lists of witnesses supplied the defect, and were sufficient to enable these charges to be proceeded with. They accordingly directed that in the case of the charge against Professor Mavor better particulars should be given, and a copy of them handed to the Counsel appearing for him; and that in the cases of President Loudon and Professor Vander-Smissen, a copy of the particulars supplied, with the names of the witnesses to the Commissioners, should also be given to the Counsel. The learned Counsel by whom the charges had been lodged with the Commissioners, declined to make the charges against Professor Mavor more specific, or to furnish copies of the particulars of the charges against President Loudon and Professor Vander-Smissen to the Counsel representing these gentlemen. On the Commissioners stating that they were prepared to proceed with the charge against Professor Vander-Smissen, Counsel stated that he would withdraw the charges.

The Commissioners then made and read to the parties publicly the following memorandum:

"As to the charges against Professor Mavor they have been held too vague in the absence of particulars, and no particulars have been given. As to the charges against President Loudon and Professor Vander-Smissen, they are, when taken with the particulars furnished by Mr. Riddell to the Commissioners, specific enough, and may be proceeded with. Mr. Riddell has given to the Commissioners the name of a complainant and the names of witnesses by whom it is alleged these charges can be proved. It was thought by the Commissioners that these particulars should be furnished to the Counsel for the parties charged. Mr. Riddell declines to furnish those particulars. The Commissioners then feel it to be their duty to hand those particulars to the Counsel for President Loudon and Professor Vander-Smissen, but now Mr. Riddell asks to withdraw them. The Commissioners allow him to withdraw the names of witnesses, but as the charges have been made, will allow anyone to give any evidence in reference to them—for or against them—in accordance with the particulars already furnished. Any person desiring to prosecute those charges may notify the Commissioners on Tuesday morning of his intention to do so."

Upon this memorandum being read, Mr. Riddell stated that he withdrew from the case so far as those charges were concerned.

28. At the time named the Commissioners met publicly, in the place where all their sittings were held, and announced their readiness to proceed with the charges; but no one appeared to prosecute them, or to offer any evidence in relation to them, so they were no further proceeded with, the Commissioners feeling that every opportunity for investigation had been given, if any person desired it to take place.

29. A copy of the charges against President Loudon, Professor Mavor and Professor Vander-Smissen, together with the particulars given to the Commissioners, along with the names of the witnesses proposed to be called against President Loudon and Professor Vander-Smissen, omitting, however, the names of these witnesses (Exhibit D) is transmitted herewith.

30. The Commissioners desire to draw attention to certain items in the Federation Act, Revised Statutes of Ontario, 1887, Chapter 230, which contains expressions so vague as to obscure the distinction in jurisdiction and control of the Senate, the University Council, and the University College Council. Such are sections 34, 39 (clause 6), 42 and 45. In view of section 38, clause 3, they suggest that section 54 be so modified as to exclude the enrolled students of federated or affiliated

colleges from evading discipline by assuming the position of extra mural applicants for examination. While approving the wisdom of section 56 in its general provisions, the Commissioners would like to see it amended so as to contain a more definite statement concerning the powers of discipline of the University Council: and they call in question the prudence of section 57, which throws on the Council the entire responsibility for the work of all societies and associations of students. The history of other educational institutions indicates that vagueness in the letter of the law often leads to violation of its spirit, and that minute superintendence, combined with espionage, almost necessarily provokes revolt. The experiment of Cornell University in creating a student Council has not proved wholly successful, but its object, which is the enlistment of the student body on the side of college discipline and self-respect, is one to be sought after, as tending towards honorable relations between professors and students.

31. In this connection the Commissioners give a letter received, in reply to a request by the Chairman, from a Canadian graduate, who, after taking a post-graduate course in philosophy at Cornell University, has spent some time there this spring:—

"The student Court at Cornell University was not established as a reform "demanded by the students. It was the idea of President Schurman, and owed its "origin to him. As a consequence it has never received that hearty support from "the student body which is absolutely necessary for its success. Dr. Schurman "informed me, last month, that some of the students are dissatisfied and object to "the discipline being in the hands of their fellow-students, but he was unable to "say whether that feeling is at all general. The President's secretary was of the "opinion that it is confined to a small minority of the students. Upon enquiry, "however, I found that the dissatisfaction is widespread. I was assured that the "Court does not command the confidence of the students, because the best men "regard election to it as a doubtful honor, and refuse to become candidates. Most "of the candidates are students who could not be elected to any other office in the "gift of their classmates. The students as a whole take but little interest in the "elections, and the vast majority of them abstain from voting. In a class of 400 "a poll of 100 would be a large vote.

"Some odium is incurred by the members of the Court, but I do not think it "has ever been, as yet, very great."

32. At a sitting of the Commission Mr. Blake stated that he had requested Mr. Goldwin Smith to give the Commissioners an expression of his views in connection with the question of University government, and on a subsequent day Mr. Smith had a conference with them. He afterwards handed in a statement, in writing, containing the substance of what he then said. This document (Exhibit E) is transmitted herewith.

33. Professor Pike and Professor Cameron also attended the Commissioners and laid before them a paper of suggestions made by the University Council and University College Council. This paper (Exhibit F) is also transmitted herewith.

34. The Commissioners also had an interview with the Rev. President Burwash of Victoria University, at which while expressing sympathy with the University authorities in the recent difficulty, he indicated the impossibility of any President managing a thousand students, and quoted the late President McCosh of Princeton to the effect that even five hundred are more than one man can control. Following the analogy of the older English Universities with their college systems he urged the necessity for an organization of the students into manageable bodies, with a view to personal influence on the part of professors

and teachers. In such an organization he showed that the holders of fellowships may be an element of danger, their minds being divided between sympathy for the students and aspirations towards the position of the professoriate.

35. The Commissioners began their work on the 8th instant. They were engaged in taking evidence and in hearing argument of Counsel from the 10th to the 23rd instant inclusive. They had before them calendars of leading British and American universities, and papers by distinguished authors on college work and discipline. Understanding that the Government desires a speedy return of the Commission, the Commissioners were unable in the time taken to more fully enquire into and consider the questions of "the respective powers of the governing bodies of the University of Toronto and the University College with respect "to the students of the said University and College, and into all matters bearing "upon the administration of such bodies, since the date of the proclamation of the "R. S. O., chap. 230, and of dealing with the various societies and associations of "students," so as to enable them to report recommendations other than those already appearing in this report. This is a matter of regret, as it would be important to further ascertain and consider how some other great Universities are governed and how they deal with university and college societies, and how, and to what extent, and with what result, certain irregularities are made subjects of discipline, and to ascertain and consider other matters bearing upon the administration of such bodies, so that such recommendations might be made as would result in practical good to the University of Toronto and University College.

36. The Commissioners were much gratified to have presented to them documentary evidence of the high character of the teaching imparted in various departments of University and College work, and to learn that recent graduates of the University are filling honorable positions in the larger educational institutions of the United States. While deploring, therefore, the unfortunate accidents which have called them as a body into existence, they see no reason for apprehension as to the future of the University of Toronto, nor for any fear that the wonderful increase in the number of its Alumni during the past five years will suffer a check in consequence.

All which is respectfully submitted.

T. W. TAYLOR,
Chairman.
J. J. KINGSMILL.
E. J. SENKLER.
B. M. BRITTON.
JOHN CAMPBELL.

Toronto, 27th April, 1895.

EXHIBIT A.

University Commission.

The Commissioners appointed by his Honor the Lieutenant-Governor, "To "inquire into certain matters affecting the University of Toronto and University "College," are prepared to proceed with the said inquiry; and notice is hereby given that any student or any person who desires to submit a complaint in respect to the discipline or exercise of authority by the Councils of the University of

Toronto and University College, or in respect to the friction alleged to exist between the students and the said Council, or as to the qualifications, conduct, teaching and efficiency of any member of the University of Toronto and University College, may submit the same in writing on or before Saturday, the thirteenth day of April inst., addressed to the Hon. T. W. Taylor, Chairman, University Commission, Biological Department, Toronto.

The said complaints, if any, will be considered by the Commission, and parties making the same will be heard in support thereof at the Biological building on Tuesday, the 16th day of April inst., at 10 o'clock in the forenoon.

T. W. TAYLOR,
Chairman of Commission.

Dated 8th April, A. D. 1895.

EXHIBIT B.

COMPLAINT SUBMITTED TO THE COMMISSION BY JAMES ALEXANDER TUCKER, UNDER CLAUSE 1 OF THE COMMISSION.

Mr. Tucker had during the fall of 1894 been editor of the *Varsity*. He was relieved from that position and Mr. Montgomery elected in his stead on or about the middle of December, 1894.

On January 16th appeared an article in the *Varsity*, which will be referred to, referring to the state of affairs existing between the Political Science Club and the University Council. A meeting of the University Council was held January 18th, 1895, and subsequently on the 19th President Loudon called upon Mr. Montgomery to apologize, threatening that in default Mr. Montgomery would be expelled and the *Varsity* suppressed. Mr. Montgomery apologized, and on January the 23rd his apology was accepted by the University Council.

On January the 24th a meeting was held of the Business and Editorial Boards of *Varsity*, at which meeting these Boards refused to endorse Mr. Montgomery's apology or to publish the same, whereupon Mr. Montgomery resigned and Mr. Tucker was appointed editor.

On January the 26th a *Varsity* appeared not containing an apology, whereupon on January the 29th the University Council again met. Upon that day the University and College Councils being both present, Mr. Tucker was summoned before the Councils and was asked four questions by the President. Mr. Tucker protested that if the Council were trying him upon any charge he was entitled to have Counsel present, but the President pressed him to answer these questions, and he did answer them. The questions and answers thereto were as follows:

Q. Were you editor-in chief of the *Varsity* on January the 26th? A. I was.

Q. Were you aware that the Council had ordered that an apology should be printed in the issue of that date for an article appearing in the previous issue? A. I was, but not through any official intimation.

Q. Were you the writer of a letter appearing in the *Mail* signed James A. Tucker, class of '95, University College? A. I was.

Q. Have you any explanation of your conduct to offer? The answer to this was to the effect that Mr Tucker had accepted the position of editor of the *Varsity* on the understanding that no apology was to be printed, that a mass

meeting of over 500 students held by the Literary Society on the previous Wednesday had not endorsed Mr. Montgomery's course, and that at a meeting subsequently held, the Editorial and Business Boards of the paper had refused to ratify the apology sent by him to the Council; that he had consequently resigned, and that Mr. Tucker was elected to and accepted the position of Editor on the distinct understanding that no apology was to be made. Thereupon, the President requested the members of the College Council to retire, that the University Council might deal with the matter, and he also requested Mr. Tucker to leave.

On January the 30th, the registrar told Mr. Tucker that Prof. Pike wished to see him at 12 noon, and that the President would see him in the afternoon, and informed him of the action of the Council.

Upon calling upon Prof. Pike, he tried to induce Mr. Tucker to apologize.

In the afternoon the President informed Mr. Tucker that the University Council had sentenced him to suspension from lectures. Mr. Tucker asked that the resolution of the Council be produced, whereupon the President read the resolution and directed the registrar to furnish Mr. Tucker with a copy, which was subsequently done, the resolution being in these words:

"In view of the decision of the Council of January the 18th, requiring the editor "of the *Varsity* to insert in the next following issue of the paper a satisfactory "apology for an objectionable article published in the issue of January the 16th, and "in view of the fact that the editor of the paper, J. A. Tucker, has not published "the apology in question as required by the decision of the Council,

"Resolved, that he be suspended from lectures in the University, and from "all privileges of the University until otherwise ordered by the Council."

The President, however, upon January the 30th, informed Mr. Tucker that the sentence of suspension would not go into force immediately, that it was in abeyance, and that Mr. Tucker would have a week to consider his position; whereupon Mr. Tucker replied that the President could not look for an apology even if he, Mr. Tucker, were threatened with expulsion.

In the issue of the *Varsity* of January the 26th, had appeared a retraction only of the erroneous statement made in the article to which the Council had taken objection. During the subsequent week Mr. Tucker continued to attend lectures, and having received no notification of the sentence being put into operation, he continued to attend lectures thereafter.

On Wednesday, February the 6th, Mr. Tucker addressed a letter to the President asking him (if he could not answer it upon his own authority) to lay it before the University Council. The letter will be produced before the Commission, but it is in effect asking whether Mr. Tucker would be debarred from writing at the examinations in May, or, having written, from obtaining his degree. No answer was given to this until February the 11th, when the registrar sent a letter, by the instruction of the President, acknowledging the receipt of Mr. Tucker's letter of February the 6th, and asking, for the President, for an explanation as to Mr. Tucker's continued attendance at lectures in defiance of the Council's order of suspension.

On February the 12th, Mr. Tucker again wrote to the President stating his position and hoping for a settlement of the difficulty, which letter will be produced also to the Commission, but to this letter no answer was ever received.

Subsequently, on February the 20th, a mass meeting of the students was held in Wardell's Hall, at which, amongst other things, the following resolution was passed: "That they request that the suspension of the editor, James A. Tucker, be re-considered," and at the same meeting a committee was appointed to consult

with and meet the Councils with that object in view. This committee met the University Council on March the 9th, and pressed upon the said Council that Mr. Tucker's suspension should be removed, but this was refused, and on March the 18th, a letter was received by Mr. Greenwood, of that committee, from the registrar, stating that the University Council, after considering the reasons presented by the students of the committee, resolved to adhere to its former decision.

As to this, Mr Tucker complains:

(1) That it is, under the circumstances, beyond the power of the University Council in law to suspend him from lectures and the privileges of the University; and also,

(2) That if the power exists, it has been unwisely and unfairly used against, him. He was in no wise responsible for the article complained of, and moreover he is simply the mouth-piece of the students, whose property the *Varsity* is; the governing boards of the *Varsity* would not permit any apology to be inserted in the *Varsity* even if Mr. Tucker were so disposed, and further, after the resignation of Mr. Montgomery, Mr. Tucker was the only person in the College who was qualified, according to the constitution of the *Varsity*, to act as Editor in Chief, so that if Mr. Tucker were to follow the example of Mr. Montgomery and personally apologize (even if that would be acceptable to the Council), the result would be that the student's organ must either go out of existence, or be carried on in defiance of the Constitution.

EXHIBIT C.

HISTORICAL STATEMENT OF THE FACTS LEADING UP TO THE FRICTION EXISTING BETWEEN THE STUDENTS OF THE UNIVERSITY OF TORONTO AND UNIVERSITY COLLEGE, AND THE COUNCILS THEREOF.

On November 7th, 1894, Professor Mavor, Professor of Political Economy, etc., in the University of Toronto, being then Honorary President of the Political Science Club, drafted a programme of addresses for that Club. The Political Science Club is an association of students in the University of Toronto and University College, who are interested in the subject of Political Science and similar subjects, and has about one hundred members. This programme contained, amongst other things, an arrangement for a labor meeting, at which addresses were to be given by Messrs. Jury and Thompson, who were prominent in labor circles in the city of Toronto. Prof. Mavor at that time informed the Committee that he thought no objection would be made to these gentlemen, provided the matter was kept quiet. He himself approved of it, but he mentioned to the Committee that about eight years ago there was some trouble about Mr. Jury lecturing in the College which, he said, had broken up the Political Science Club, but he thought that if matters were kept quiet there would be no difficulty. By some means the matter became public that these gentlemen were to address the Political Science Club, and at the next meeting Prof. Mavor stated to the Committee that what was before difficult, had now become well nigh impracticable. It would appear that at this meeting Prof. Mavor got the impression that he was authorized to strike these two names off the list, but this authority was never given to him. As a matter of fact the officers of the Political Science Club had never understood that it was necessary that any of their programmes should be submitted to any authority, and thought that if Prof. Mavor

did not object, no objection would or could be made by any one. As a matter of fact it is believed that no programme of any Society in connection with the University has been required to be submitted to the Council, nor has the Council interfered in any way with the programmes of any such Society.

Prof. Mavor was informed by the Committee that the members of the Political Science Club were unanimous in their wish to hear these gentlemen, and the programme was published with their names, as the Committee understood, with the consent and approval of Prof. Mavor. However, at the first meeting, November the 28th, Prof. Mavor said that he had been unfairly treated, and resigned his position as Honorary President of the club, putting his reasons in writing. About this time appeared a notice setting out certain formalities to be complied with by Societies, and making application to the Council for rooms in the Gymnasium Building. Acting upon this, on November the 30th, formal application was made to the Council, which met on December the 4th and considered the matter.

In the meantime, about November the 19th, Prof. Mavor had submitted to the Council a programme of meetings without the names of Jury and Thompson, and the Council had sanctioned the programme then submitted.

At the meeting of December the 4th, however, this former sanction was withdrawn, and the consideration of the application of November the 30th was postponed until January the 3rd, thereby preventing the lecture of Prof. Mills, which had been fixed for December the 19th.

Then on January the 8th a letter was received by the Secretary of the Club from the Registrar of the University, stating that "With regard to the pro-"gramme for the authorization of which application is now made, the "Political Science Club is advised that the programme having been published "without the observance of the proper preliminaries, cannot, under the circum-"stances, be sanctioned by the University Council."

In connection with this matter President Loudon was seen, and he stated in speaking of the reasons why the programme had not been approved, "That he "was personally opposed to having Mr. Jury," and said "If for no other reason, "because he was an active politician, a notorious Grit and agitator; and for "the same reason he would object to Sir Richard Cartwright lecturing in the "Halls."

Prof. Wrong in speaking to his class, said that some seven or eight years ago Mr. Jury had been permitted to lecture in the building; that for permitting this, the University authorities were most violently attacked by certain church papers, and it was a recollection of this attack and a fear of a similar occurrence that had led to efforts being made in the first instance to have the Club strike these two names off the Political Science Club's programme. It appeared clear to the members of the Political Science Club that for some reason the University Council did not wish these gentlemen to address the Club, and that, for reasone which did not affect their judgment upon the questions as to which they wers to address the Club.

The next was the publication on January the 16th of an article in the *Varsity* to which the Council took exception. This article was written by Mr. Montgomery, and has been referred to in Mr. Tucker's complaint. On January the 19th Mr. Montgomery, the Editor, was sent for and informed by President Loudon that the Council had decided that an apology must be printed in the next number of the paper, and if such apology were not made, Mr. Montgomery would be expelled and the paper suppressed. Further proceedings in connection with

this matter have been detailed in the complaint of Mr. Tucker upon the first branch of the investigation.

About this time and a little later, a Petition signed by a number of the students, some 400 in all, was forwarded to the Government. (A copy of this Petition will be furnished to the Commissioners.) This Petition in the long run was not granted.

On January the 11th, by reason of the refusal of the University Council to grant rooms, etc., the Political Science Club passed resolutions to engage a hall for the purpose of holding a meeting to hear Messrs. Jury and Thompson.

The President on January the 23rd caused an article to be published in the Toronto papers setting forth the position taken by the Council and its reasons therefor, whereupon the Political Science Club published its statement in the Toronto papers on January the 25th.

On January the 31st a Mass Meeting of the students was held, at which a Committee of five was appointed to draw up a statement on their side of the case, and such a statement appeared in the *Globe* of February the 2nd. On February the 4th, Prof. Wrong published an article in the Toronto papers giving his views of the situation, to which a reply by Mr. Tucker appeared on February the 5th. In the same paper of February the 4th Mr. B. E. Walker wrote an article dealing with Prof. Wrong's appointment. On February the 9th Prof. Dale replied. This letter of Prof. Dale appearing in the *Globe* of February the 9th led to his dismissal by the Government, which dismissal was announced on February the 15th.

On the 15th of February, a Mass Meeting was held of the students, an account of which will be found in the *Globe* of February the 16th at which, amongst other things, a resolution was passed of sympathy for Mr. Hellems, who resigned his position on the staff, owing to the dismissal of Professor Dale, also respectfully requesting the reinstatement of Professor Dale, and pledging the students to abstain from all lectures of the University until his reinstatement, or until the dismissal of Professor Dale was re-considered. This meeting motion to abstain from lectures was carried with only four dissenting voices. Immediately thereafter on Feb. the 16th, articles appeared in the *Globe* and *Mail* attacking Professor Dale, and also in the *World* of about that date, which articles were written or inspired by members of the University Council. A number of students continued to attend partially, certain students taking the 4th year honor mathematics, and while they did not attend lectures, took the laboratory work, and President Loudon stated that the Council could not permit a class to take the laboratory work without attending the lectures. About the same time a number of lady students received notice ultimately emanating from the President, that any one of them advising another to abstain from lectures, would render herself liable to expulsion. This notice came through the lady superintendent, Miss Salter. About the same time President Loudon locked the doors of the Biological Building upon certain students there meeting, doing this with the view of preventing an address to these students by Messrs. Tucker and Greenwood.

On February the 20th a Mass Meeting of students was held at Wardell's Hall, the proceedings of which appeared in the papers of February the 21st. The Minister of Education had previously stated that a commission would not be granted upon the application of the students unless, and until they made specific charges at the meeting of February the 20th. The legal opinion of Messrs. Howland, Arnoldi & Bristol, Barristers of Toronto, was read advising against such specific charges being made.

The above is an historical statement of the cause of the friction now existing, but back of all this, is the sentiment which the President of the University has inspired in the students towards him. The sentiment referred to as inspired by President Loudon, is a feeling that President Loudon is unworthy of belief, that no confidence can be placed in the truth of his statements, and further that in approaching him, the student feels that he is approaching one who is lying in wait to entrap him, and not one who is desirous of assisting the student in his difficulties, or smoothing over matters of irritation, to one who is more anxious arbitrarily to exercise authority than to remove causes of complaint. Never once so far as is known to the members of the Political Science Club, has President Loudon made an effort to reconcile the Council with the Club, or the members thereof. In connection with this also, and as one of the causes of the friction, must be considered the charges made by Professor Dale in his letter to the Toronto *Globe* above referred to, and it is believed that the Council was also, to a certain extent, incensed at articles which had appeared at various times in the *Varsity*, amongst others in the *Varsity* of Oct. the 17th, Oct. the 31st, Nov. the 7th and Nov. the 28th.

The causes, it is submitted, which led to the present state of friction between the Councils and the students are as follows:—

(1) The facts alleged in the issues of the *Varsity* of date, October the 17th, October the 31st, November the 7th and November the 28th, 1894.

(2) The publication of such facts in the *Varsity*.

(3) The unwise action of the Council in reference to the programme of addresses of the Political Science Club.

(4) The unconciliatory manner and actions of the gentleman (President Loudon) entrusted by the Councils with communicating to the students the resolutions of the Council.

(5) The unwise and unlawful attempt by the Councils to interfere with the criticism on the part of the *Varsity*.

(6) Threats of suppression of the *Varsity* and threats of expulsion of the editor.

(7) The attempt to render Mr. Tucker responsible for Mr. Montgomery's articles, and to force him to print an apology which it was neither his duty, nor in his power, to do.

(8) The uncalled for suspension of Mr. Tucker.

(9) Articles printed in the Toronto papers, written or inspired by members of the University Council, attacking Professor Dale.

(10) The facts alleged in Professor Dale's letter to the *Globe* of February the 9th.

(11) The summary dismissal of Professor Dale.

(12) The refusal on the part of the University Council to reinstate Mr. Tucker.

(13) Want of confidence on the part of the students in President Loudon as hereinbefore referred to.

EXHIBIT D.

The following charges are laid against President Loudon :—

(1) He has entirely failed to win and keep the respect or confidence of the undergraduates during his incumbency of the office of President.

(2) He has not been frank and candid or conciliatory in his dealings with the students.

(3) He is destitute of the personal dignity which ought to characterize the President of a great University.

The following charges are laid against Professor Mavor :

(1) That he has not sufficient knowledge of the subjects which he is expected to teach.

(2) That if he is possessed of sufficient knowledge, he lacks the capacity to express what he does know, and to impart information upon those subjects.

(3) That his manner and person are repellent.

(4) He does not inspire respect or confidence in those whom he teaches.

(5) He is in the habit of nagging and worrying students without any or sufficient reason therefor.

The following charges are laid against Professor VanderSmissen :

(1) He is indolent, neglects his classes, fails to attend during the full hours of lectures, and while he may know his work, he fails through indolence and carelessness to teach properly.

As to President Loudon.

In addition to the matters which have been and are investigated by the Commission, the following matters in connection with President Loudon should be considered :—

1. *The Hose Incident.* President Loudon, in October, 1892, with his own hand, turned the hose on students.

2. *The Shed Incident.* Two men who took no part in the pulling down of the shed were fined $15 each, a sum far in advance of the value of the shed itself.

The President to Mr. Montgomery and others, threatened to suppress the *Varsity*; subsequently on meeting a committee, he declared that he had never used the word "suppressed."

That he had spoken of suppressing the *Varsity* will be proved.

The President, as will appear by an article in the *Globe* on May the 17th, 1893, referred to the students in the Department of Political Science as "lame ducks."

The President denied, in an interview with an *Empire* reporter, Mr. Long, that he was opposed to Mr. Jury because he was "a notorious Grit and agitator," etc.

The President gave Gillies a written permit to use a room in the basement of the University for the *Varsity*.

Tucker used the key belonging to Gillies and gave it to Spencer to give to

Gillies. Spencer kept it by order of the President and would not give it to Gillies. The President denied that he had granted the *Varsity* the use of this room, although he had signed the permit himself.

On Monday afternoon, February the 18th, 1895, during the boycott, a meeting was held by the first and second year medicals in the Biological Building, at three o'clock.

During the afternoon, before the hour of meeting, the President went down to the Biological Building and wrote a note to be read before the medicals.

When Prof. Heebner finished his lecture at 2 p.m., he entered the small room where were President Loudon and Prof. Chapman. President Loudon had apparently wished Prof. Chapman to read this note to the medicals, but he declined, whereupon he asked Prof. Heebner, who was also unwilling to do so, whereupon Mr. McGillivray volunteered to make any announcement.

President Loudon told Mr. McGillivray that policemen were at the entrance to the Biological Building, and Messrs. Tucker and Greenwood would be arrested if they attempted to enter the building. When this announcement was made to the medicals, they tried to leave the room, but found the doors had been barred. Some of the students were forced to climb out of the windows, others forced to open the door and get out that way.

While it may be that certain students may have some feelings of respect towards, or confidence in the President, it is believed that almost any student will testify that almost the universal feeling towards the President is want of respect and confidence.

AGAINST PROFESSOR VANDERSMISSEN:

(1) Women students get outside help:—Of the class of '95; of the class of '96.

(2) Failure to appear at the usual hour, and neglect. Indeed this is a standing complaint amongst all who have Honor Moderns in the 3rd and 4th years.

(3) In January, 1895, he lost his notes on the Middle High German Text for the fourth year and could not lecture for two weeks.

(4) About March last, he announced that he was preparing a special lecture on "Faust" for the class of '95. This lecture was given March 26th, and was precisely the same as he gave in his first lecture to the class of '95 in their third year.

(5) One of his favorite lectures, "Eur Faust" has been given three times over this year to the third year Honor Moderns.

Almost every graduate and undergraduate of recent years can testify to the want of attention of Professor VanderSmissen.

EXHIBIT E.

MINUTE OF CONFERENCE OF PROFESSOR GOLDWIN SMITH WITH THE UNIVERSITY COMMISSIONERS, APRIL 23RD, 1894.

With regard to the quality of the instruction, the University seems to have borne investigation well. Complaints were lodged against only three of the Professors, and in all three cases they were withdrawn. The ideals of young men are high. They should remember that neither thorough mastery of a great subject, nor the faculty of teaching it orally, is very common, and that the union of the

two is rare. The quality of the instruction too must necessarily bear some proportion to the revenues, the amount of which again depends partly on the fees. More allowance must be made in the case of a lecturer in such a subject as History or Political Economy, who has to draw for an hour on his own knowledge, thought, and power of expression, than in that of a lecturer in Physical Science or any subject in which the lecturer is relieved by experiment or demonstration.

At the same time the choice of instructors for the University of Toronto has perhaps not been entirely free. It may have been restricted in some degree by Nativism. When, some years ago, two or three Englishmen were appointed to professorships, a strong manifestation of Nativist feeling ensued. Two men, both of whom have since greatly distinguished themselves as heads of places of education, have at different times within my own memory appeared, or been currently mentioned as possible candidates for office in Toronto University, and in such cases Nativist jealousy was aroused, and steps were taken to block the possible candidature. At Cornell University, with which I have an honorary connection, the President is a native of Canada, though naturalized in the United States; the Librarian is a Canadian; two of the Professors are Englishmen; and I see that a Canadian has just been appointed as assistant Professor. Cornell freely welcomes capacity without regard to birth-place or extraction. It is partly to this probably that she owes her rise in twenty-six years from her foundation to a place among the great Universities on this Continent, with a fair hope of a place among the great Universities of the World. It is not unlikely that Nativist feeling may have had something to do with the attack on Professor Mavor. It appears at least from the language in which the charges were couched that, in his case, dissatisfaction with the lectures was not the sole origin of the movement.

It is in the department of discipline that the breakdown has occurred, and the necessity for this investigation has arisen. The boycott was organized mutiny, and to it authority appears to have succumbed. Authority probably has, in these times, to deal with more difficult matter than it had in times past. Formerly the students were not only much fewer in number, but came from homes in which respect both for authority and for social rules was traditional and strong. Student respect for authority and social rules is the mainspring of discipline in an English University, and no doubt it was, for some time, the mainspring here. At Oxford we had sometimes to deal with disorder, especially among the wealthier and less industrious students, but never with mutiny; while an appeal to the instincts of gentlemen seldom failed of its effect. An outbreak of "hazing" of a kind offensive and insulting to the victim could be quelled by a serious intimation that the College held itself bound to protect the feelings and honor of everyone beneath its roof, and would perform that duty at any cost. But the free High Schools are now sending up a large number of students of a class probably more democratic and less amenable to social rules. Moreover by the general tendencies of the age, authority is being everywhere relaxed and disrespect for it is gaining ground. The Counsel for the students no doubt truly expressed the sentiments of his clients when he said that the Professors existed for the students and not the students for the Professors; though he might have qualified his remark by a recognition of the two-fold function of a Professor, who ought not only to teach his students, but by study and research to advance his department of knowledge for the benefit of the world at large. A rougher version of the same sentiment was the cry heard by one of the witnesses before the Commission that "seven hundred students were not to be put down by a few beggarly Professors." As if the seven hundred

men of one of our volunteer regiments were to say that they were not to be put down by a few beggarly officers. In addition to this, our political elections and campaigns have bred a general habit of agitation, perhaps of intrigue, and a love of mass meetings and oratorical excitement, which may have penetrated the student world. It is a significant fact that a large proportion of the active element in this movement should have been furnished by the department of Political Science. Whether the studies comprised in the department of Political Science are sufficiently substantial and disciplinary in their character to constitute a University training may be a point for consideration. That they have a tendency to beget political aspirations and activity at an early age seems beyond question.

Whether there has been any lack of the power of control in the authorities personally or any of them, is a question respecting which I, of course, have no means of forming an opinion. The absence of the Chancellor at the crisis, though unavoidable, was unfortunate, since he is probably to the student mind the highest and most imposing embodiment of academical law, while he would have stood apart from all the embroilments and altercations.

Such being the state of affairs, any proposal for strengthening the hands of authority, or invigorating discipline, will certainly be in season. Nor need it involve any suggestion of harshness in the relation between the governing body of the University and the students, or forgetfulness of the fact that the normal security for order is good feeling kept up by sympathy, tact, and friendly intercourse on the part of the authorities, with loyalty to the University on both sides. It is weakness, that by tempting insubordination, leads to the odious necessity for harsh measures in the end. The proposed establishment of a University Court for disciplinary purposes seems likely to meet the need. Nor have I any change to suggest in the proposed composition of the Court, though the inclusion of a Medical element must depend on the retention of the Medical Department in its present relation to the University. Discipline and adminstration generally should of course be reposed as far as possible in the hands of men of social experience, rather than in those of men of learning and science, who may often be wanting in practical wisdom and in the power of dealing with young men. A perplexing question arises as to the sphere of the Court's jurisdiction and the line to be drawn between University and College offences, owing to the very peculiar relations of University College to the University, with which it has heretofore been practically identical, and the work of which is still carried on in its buildings. The only solution I can devise is that cases occurring within University College, and not directly in connection with the lectures of the University, should be dealt with by the University Council of discipline through its University College members, who might form a standing committee for that purpose. Cases occurring in Victoria or any affiliated college, there would be no difficulty in leaving to the College, unless the College itself chose to refer them to the University Council.

With regard to the suggestion that the Court of discipline should have jurisdiction over student societies and publications, I cannot help expressing my conviction that the less the University is compromised by responsibility for such societies and publications the better. The trouble in the present case has arisen partly from the equivocal relations of the University authorities to a College Society and a College Journal. If anything positively objectionable is done or written, discipline must intervene in the ordinary course; but otherwise it seems better in these matters to leave the students free. I have read for many years the *Cornell Era*, which is the college journal of Cornell University, and I do not remember to have seen in it anything disloyal to the government of the University, or open to serious objection of any kind.

Nor does it appear to me that much is likely to be gained by any standing representation of the students for the purpose of treating with the authorities of the University. The powers and functions of such a body would be apt to become matters of dispute and to give rise to misunderstanding. There need be no difficulty, when special occasion for conference arises, in obtaining a suitable representation. At Cornell they have a Student Council, elected by the students, for dealing with cases of student discipline, to which its jurisdiction is strictly confined. The President of the University takes the chair and has a vote, which, however, he does not use. Opinion seemed favorable to the institution. But in a conversation which I had with the President he admitted that the student members of the Council were placed in a somewhat invidious position in relation to their fellow-students, and that elections had been declined on that account. It is desirable that the President of the University should be as little as possible burdened with lectures, and as much as possible devoted to general government and superintendence, the maintenance of harmonious action between the different departments, and personal intercourse with the students, which, the number being as large as it now is, would give him plenty of occupation.

I should be for severing the Medical Faculty, so far as it is professional, altogether from the University, and making it an independent organization like the organization of the legal profession at Osgoode Hall. I do not see what strictly professional studies, such as Medicine and Dentistry, have to do with a University course. A University has hitherto been taken to be a final place of mental discipline and culture, imparted through studies not professional, though introductory to learned and scientific professions, such as the departments of Physical Science, which lead on to Medicine and other scientific callings, while in themselves they are unprofessional and instruments of discipline and culture. The special training and regulation of a profession are surely best committed to its own chiefs. The Medical Department once severed from Toronto University, all dissensions and causes of friction between it and independent medical organizations would be extinguished, perhaps the result ultimately would be their voluntary consolidation. The additional bulk which a University gains by the annexation of a professional school is hollow and of little value.

The most important of the suggestions which I have to offer and which I believe will meet with extensive concurrence, is that the University should be separated from the political government of the Province and placed, like the English Universities, under a government of its own, subject only to the law of the land and to any external check on its legislation which it may be deemed expedient to impose. The reason for this is general, and involves no disparagement of the intentions or of the action of the Ontario Government. The English principle is right which places the Universities beyond the reach of political and party influence. Such connection as the English Universities have had with political party has arisen, not from their form of government, but mainly from the preponderance, now happily terminated, of the clerical element, which was allied with a reactionary party in the State. Amidst the chances of party warfare and the necessities imposed upon leaders of party in the distribution of political offices, it is not likely that a Cabinet will often, much less that it will always, contain a member fitted by his turn of mind and by his experience of academical matters, to regulate a University. Fear of political influence has operated in one instance at least to deter a Canadian college from coming into University Confederation. It is well known also that connection with Government operates as a bar to private benefaction. The Government would lose little by the change.

while it would be relieved of some embarrassments. It cannot derive much strength from patronage which it is not at liberty to use in requiting political effort or attracting political support. On the other hand, Government may be swayed in academical appointments by political fear, and its political tremors may, in some crisis like the present, communicate themselves to the action of the authorities of the University.

I would venture to suggest, therefore, that the estate should be made over to the University, to be managed by its trustees or through a Committee of the Senate, perhaps with the Vice-Chancellor in the chair, and, of course, with a professional Bursar. The nominations to the Presidency and the Professorships I would give to the Chancellor, but require him to submit them for acceptance or rejection to the Senate. I would require him, before sending a name to the Senate for a Professorship, to communicate it to the President of the University and hear what the President has to say. At Oxford and Cambridge the appointment of some Professorships has been given to Boards of experts; but experience seems to show that individual responsibility is the best security. Legislation would be the function of the Senate, which, in any case involving a draft upon the revenues, would, of course, consult the trustees or its managing committee. At Oxford and Cambridge, such of the University and College statutes as have been framed or ratified under Parliamentary authority, can be amended only with the consent of the Privy Council, which in England is not a political body. Submission to the Lieutenant-Governor might form a similar safeguard here.

In any case it will be most reasonable and necessary to give all the University Professors, who constitute the working body of the Constitution, seats in the Senate, their representation in which is manifestly inadequate.

EXHIBIT F.

Suggestions of the University Council and the Council of University College.

I. The establishment of a "University Court," with full powers of expulsion, suspension, infliction of fines, etc., to deal with all University breaches of discipline, whether arising out of the examinations, or in connection with the regular work of the term.

Composition of the Court.

The President and one member from each of the following bodies:—

The University Professoriate.

The University College.

Victoria University.

The School of Science.

The Medical Faculty.

The Councils think that such a Court should also have power to deal with contraventions of College regulations of sufficient gravity, on the report of the College authorities. The Court should have control of all Societies and Associations of students, also of all student publications, with power to delegate the supervision to members of the Professoriate.

In the case of Societies decided by the "Court" to be "College" societies the control must be delegated by the "Court" to the College to which they belong.

It is extremely desirable that there should be a uniform system of discipline throughout the whole University, and that the Court should be limited in numbers and yet contain a member of each of the divisions, in order to secure the cohesion of the University.

"College" Societies not infrequently become "University" societies, and the decisions as to whether this has taken place or not should rest with this central authority.

II. A more exact definition of the distinction between University and College offences than now exists.

The new University Act should define the distinction between University and College offences. We have experienced great difficulty in making any distinction in the case of University College, which uses the same building as the University, at the same time.

A similar difficulty arises in the case of the Medical Faculty. The difficulty of distinguishing between University and College administration is also greatly felt in such questions as the control of the buildings and grounds, the admission of outside lecturers, the allotment of rooms, the preparation of the estimates for the year, the compilation of the Calendar and the control of the College Residence

III. The establishment of a new Council, consisting of the joint Professoriates of both University and Colleges.

1. To exercise the functions of the Senate Committee on applications and memorials.

2. To fix the time-table of lectures.

3. To undertake the revision of the curriculum in Arts subject to the assent of the Senate, this revision to be undertaken in conjunction with representatives of the High Schools on the Senate, representatives of the School of Science and of the Education Department, together with the Heads of all affiliated institutions concerned in the Arts curriculum.

It has been found necessary in the past to have meetings of the joint Professoriates in order to arrange the time-table and to undertake the revision of the curriculum, and we think this body should have a statutory existence. It is suggested that to these functions should be added those of the Senate Committee on Applications and Memorials as defined in the statute, viz.:—

"All petitions and memorials relating to attendance at lectures and examinations or academic standing shall be laid . . . before the Committee, which shall report to the Senate, with recommendations in each case."

IV. The formation of the Medical Faculty into an independent Collegiate body, with powers of discipline and administration similar to those of the several Colleges of the University.

The advisability of this is evident from the fact that in the present University Council the number of the Medical exceeds that of the Arts Professors, and also that matters affecting the Medical Faculty are necessarily distinct from those of the Arts Faculty.

V. A better representation of the several departments of the University and of the College and Medical Faculty on the Senate.

The Councils think that every graduating department in the University should be represented on the Senate, and they recommend that the University Professoriate in Arts should be *ex officio* members of the Senate, and that a suitable number of representatives should be appointed by each of the Colleges of the University, that is to say, from the Professoriates of University College, Victoria College, and from the Medical Faculty.

The necessity for a change in this direction is apparent from the fact that, at present, of the sixty members constituting the Senate, only three represent the University and one University College.

UNIVERSITY OF TORONTO.

REPORT OF

STANDING COMMITTEE

ON FINANCE

1895-6

(ADOPTED JANUARY 10TH, 1896.)

PRINTED BY ORDER OF THE LEGISLATIVE ASSEMBLY.

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1896.

UNIVERSITY OF TORONTO.

REPORT

OF THE

STANDING COMMITTEE ON FINANCE.

TORONTO, 2nd December, 1895.

The Standing Finance Committee beg to submit their report for the year ending 30th June, 1896 :

1. They have obtained from the Bursar the estimates of the receipts on income account for the year ; and from the Bursar and the heads of University departments they have received estimates of the probable expenditures for the year.

2. They also incorporate in their report, for the sake of convenience, the estimates of University College, which have been furnished to the Committee for their information by the Council of University College.

3. The forms of account which were employed in last year's report have been adhered to, and for the purpose of comparison the actual results of the transactions of the year 1894-5 are given.

UNIVERSITY OF TORONTO.

Estimated Revenue, year 1895-6.

	Estimate 1895-6.	Receipts. 1894-5.
	$ c.	$ c.
(*a*) Interest on balance purchase moneys (old sales)	1,550 68	2,153 98
do (Devonshire Place sales)	1,616 99	
(*b*) Interest on loans	31,194 76	34,989 76
Interest on debentures	15,506 70	12,157 26
(*c*) Rents, University Park	8,909 44	8,795 20
Rents, business properties, etc	2,836 58	3,759 92
Rents, miscellaneous:		
School of Science site	925 00	1,054 58
Medical Faculty Allowance *re* Biological Building	1,900 00	1,900 00
Board of Health Allowance *re* do	200 00	200 00
(*d*) Fees, University and College	43,000 00	43,748 75
(*e*) City of Toronto, payment	6,000 00	6,000 00
(*f*) Transfer fees, (discharges of mortgages, etc)	40 00	43 50
(*g*) Interest on advances to U. C. College:		
(1) On original advance, *re* new building and equipment	3,058 33	3,024 04
(2) On advances on account of $100,000 endowment	1,599 80	
(*h*) Sundry earnings, land	1,880 00	1,927 50
(*i*) Interest on bank balances		132 60
(*k*) Unspecified donation		6 55
	120,218 28	119,893 64
Balance at credit of revenue account at 30th June, 1895, carried forward	233 90	
	120,452 18	

DEDUCTIONS.

Interest on the following Special Funds.

Account.	Amount of balance at 30th June, 1895.	Amount of interest.
	$ c.	$ c.
(*a*) Library Insurance Fund (books)	38,840 19	1,165 20
(*b*) Museum Restoration Fund	925 86	19 64
(*c*) Residence Extension Fund	780 95	23 42
(*d*) Medical Faculty Surplus Fund	304 18	9 12
(*e*) Vice-Chancellor's Special Account	232 88	6 98
(*f*) Retirement Fund	15,513 95	930 83
(*g*) Specific Endowment (scholarships)	71,624 13	4,152 80
	128,222 14	6,307 99
Interest on amount remaining to be expended on Chemical Building, fittings and equipment, $20,000, at 5 per cent		1,000 00
Interest on amount remaining to be expended on Museum cases and fittings, $5,528.36, at 5 per cent.		276 41
Total of deductions		7,584 40
Leaving $112,867.78 available for the service of the year.		

GENERAL REMARKS.

1. Of the items of revenue estimated in last year's report, a sum of $1,890.49 in respect of certain expenses of the Bursar's office properly chargeable to Upper Canada College, had to be written off. In addition to this, in finally arranging with the Government as to the ground rent in connection with the School of Science, a shrinkage of $500 in the estimated receipt occurred.

2. These shortages in receipts had the effect of converting the apparent surplus of $1,248.70, shown at page 6 of last year's report, into a deficit of $1,141.79; but notwithstanding this, the receipt of other unanticipated items of revenue enabled the accounts of the year to be closed with a credit balance of $233.90.

3. With regard to the present year, however, the report shows estimated expenditures to the extent of $4,315.13 in excess of the anticipated receipts; and it is probable that there will be a deficiency of $4,000 or $5,000, to meet which we may require to look to earnings from investments accrued but not paid at the end of the University's fiscal year.

4. As it is imperative that every possible economy should be exercised on the one hand, and every dollar of revenue due be collected on the other, your Committee desire to make the following recommendations:

(1) That a Committee be appointed to consider the cost of conducting the University examinations and the fees paid therefor by the various classes of students.

(2) That a Committee be appointed to investigate the cost of the University printing and stationery.

(3) That a Committee be appointed to suggest better regulations than those now in practice for the prompt collection of all fees due to the University.

(4) That a Committee be appointed to consider the practicability of reducing the rate of interest allowed on certain of the fellowship, scholarship and prize endowments, and of doing away with the interest heretofore allowed on certain funds.

J. LOUDON,
Chairman.

Summary of Estimated Expenditure, Year 1895-6.

	Payable out of interest on special funds.	Payable out of ordinary revenue.	Expenditure, 1894-5.
	$ c.	$ c.	$ c.
1. Salaries and Pensions :			
(*a*) Salaries (inclusive of Bursar's Office and of Retirement Fund)		83,511 00	82,369 82
(*b*) Pensions		2,350 00	1,000 00
2. Bursar's Office, exclusive of salaries		1,000 00	1,422 03
3. Expenses *re* investments, etc		800 00	1,048 13
4. Scholarships and Fellowships	3,657 50		2,745 00
5. Examiners		7,500 00	7,439 86
6. Insurance		1,592 17	1,592 17
7. Telephones		150 00	150 00
8. Library :			
Customary grant	1,100 00	1,500 00	2,686 34
Maintenance		795 00	846 18
9. Main Building :			
(*a*) Repairs, maintenance of structure, fuel, water, gas, etc		3,365 00	3,858 23
(*b*) Registrar's Office		50 00	110 00
10. Grounds		2,000 00	2,594 78
11. Chemical Department :			
(*a*) Maintenance of structure		1,100 00	
(*b*) Maintenance of department		400 00	496 26
12. Biological Department :			
Maintenance of structure, fuel, water, gas, etc		1,535 00	1,683 54
Laboratory supplies		450 00	421 27
Students' supplies		879 25	807 00
Physiology		130 00	292 07
13. Physical Department :			
Maintenance		325 00	328 22
Apparatus		500 00	
14. Mineralogical and Geological Department :			
Maintenance		200 00	180 28
Minerals		117 49	
15. Psychological Department—Maintenance		350 00	200 00
16. Mathematical Department		150 00	106 35
17. Political Science Department—Class Room supplies		50 00	
Books		125 00	
18. Classics—Class Room supplies		20 00	12 00
19. English "		200 00	
20. French "		21 00	6 77
21. German "			
22. Italian and Spanish—Class Room supplies		20 00	5 75
23. Oriental Literature "		20 00	11 31
24. Stationery—University		1,100 00	1,035 24
25. Printing "		2,750 00	2,910 96
26. Advertising "		300 00	297 65
27. Incidentals "		150 00	132 20
28. Stationery—University College		100 00	64 15
29. Printing "		100 00	96 55
30. Advertising "		75 00	65 50
31. Incidentals "		75 00	56 50
32. Convocation expenses		125 00	110 10
33. Senate elections		425 00	
34. Gymnasium—Maintenance		775 00	748 55
	4,757 50	117,180 91	117,930 76
Total estimated expenditure out of ordinary income			117,180 91
Total available income (p. 4)			112,867 78
Deficit			4,313 13

Detailed Estimate of Expenditure, Year 1895-6.

Salaries.	Estimated amount, year ending 30th June, 1896.	Amount paid year ending 30th June, 1895.
	$ c.	$ c.
1. Bursar's Office :		
Bursar (salary at $2,400, for four months $800 ; at $1,200, for eight months $800)	1,600 00	2,400 00
Accountant (salary at $800, for three months $200 ; at $1,000 for nine months, $750)	950 00	775 00
Clerk	240 00	240 00
	2,790 00	3,415 00
2. Library :		
Librarian (salary at $1,500, for six months $750 ; at $1,600, for six months $800)	1,550 00	1,450 00
Assistant (salary at $350, for three months $87.50 ; at $400, for nine months $300)	387 50	337 50
Former Assistant (salary at $350, for three months $87.50)	87 50	337 50
Assistant (salary at $300, for nine months $225), also Stenographer in Registrar's Office	225 00	.....
Delivery Clerks, two (salary at $15 per month for eight months)	240 00	240 00
Delivery Clerks, two (salary at $10 per month for eight months)	160 00	120 00
Caretaker (also paid as Gardener)	500 00	500 00
	3,150 00	2,985 00
3. General as between University and University College :		
President (also paid as Professor of Physics)	1,800 00	1,800 00
Janitor (salary at $384, for three months $96 ; at $420, for nine months $315)	411 00	384 00
Former Janitor	.....	529 00
Gardener (also paid as Caretaker of the Library)	100 00	155 00
Engineer (with rooms and fuel)	576 00	576 00
Fireman (salary at $35 per month for eight months)	280 00	252 00
Charwoman	312 00	312 00
Attendant on coat room and lavatory, at $25 per month for seven months	175 00	155 00
	3,654 00	4,163 00
4. Pensions :		
E. J. Chapman ($1,800 per annum for nine months)	1,350 00	.....
J. M. Hirschfelder	1,000 00	1,000 00
	2,350 00	1,000 00
5. University of Toronto, general :		
Vice-Chancellor	400 00	400 00
Registrar (salary at $1,200, for six months $600 ; at $1,300, for six months $650)	1,250 00	1,150 00
Registrar's Assistant also paid as Lecturer in Greek	200 00	218 00
Bedel and attendant on Senate	650 00	600 00
Architect	100 00	100 00
	2,600 00	2,468 00
6. Teaching staff, etc., University of Toronto :		
(a) Modern History and Ethnology :		
Professor (salary at $2,500, for three months $625 ; at $2,600, for nine months $1,950)	2,575 00	2,000 00
	2,575 00	2,000 00
(b) Political Science :		
Professor (salary at $2,700, for three months $675 ; at $2,800, for nine months $2,100)	2,775 00	2,675 00
Professor of Constitutional and International Law	1,000 00	1,000 00
Professor of Roman Law, Jurisprudence and History of English Law	1,000 00	1,000 00
Fellow		500 00
	4,775 00	5,175 00

DETAILED ESTIMATE OF EXPENDITURE, YEAR 1895-6.—*Continued.*

Salaries.	Estimated amount, year ending 30th June, 1896.	Amount paid year ending 30th June, 1895.
	$ c.	$ c.
6. Teaching staff, etc., University of Toronto—*Continued* :		
(*c*) Mathematics :		
Professor (salary at $3,100, for three months $775 ; at $3,200, for nine months $2,400)	3,175 00	3,075 00
Lecturer (salary at $1,000, for three months $250 ; at $1,200, for nine months $900)	1,150 00	975 00
Fellow	500 00	500 00
	4,825 00	4,550 00
(*d*) Physics :		
Professor	3,200 00	3,200 00
Demonstrator	1,800 00	1,775 00
Lecturer (salary at $1,000, for three months $250 ; at $1,200, for nine months $900)	1,150 00	975 00
Assistant Demonstrator (salary at $700, for three months $175 ; at $900, for nine months $675)	850 00	700 00
Fellow		500 00
Mechanical Assistant (salary at $900, for three months $225 ; at $950, for nine months $712.50)	937 50	900 00
	7,937 50	8,050 00
(*e*) Chemistry :		
Professor	3,200 00	3,200 00
Demonstrator (salary at $1,100, for three months $275 ; at $1,300, for nine months $975)	1,250 00	1,075 00
Lecturer (salary at $1,000 for nine months)	750 00	
Lecture Assistant	500 00	
Fellow	500 00	500 00
Former Demonstrator (salary at $500 for three months)	125 00	500 00
Former Assistant Lecturer (salary at $500, for three months)	125 00	500 00
Attendant	504 00	504 00
	6,954 00	6,279 00
(*f*) Mineralogy and Geology :		
Professor	500 00	
Former Professor (salary at $3,100, for three months)	775 00	3,100 00
Fellow	500 00	500 00
Attendant	200 00	200 00
	1,975 00	3,800 00
(*g*) Biology :		
Professor	3,200 00	3,200 00
Associate Professor of Physiology (salary at $2,000, for three months $500 ; at $2,100, for nine months $1,575)	2,075 00	1,975 00
Lecturer (salary at $1,000, for three months $250 : at $1,200, for nine months $900)	1,150 00	975 00
Assistant Demonstrator (salary at $700, for three months $175 ; at $800, for nine months $600)	775 00	700 00
Fellow	500 00	500 00
Sub-Curator of Museum (salary at $624, for three months $156 ; at $666, for nine months $499.50)	655 50	624 00
Attendant and Caretaker	500 00	495 00
Boy cleaner	120 00	120 00
	8,975 50	8,589 00
(*h*) Italian and Spanish :		
Associate Professor (salary at $2,000, for three months $500 ; at $2,100, for nine months $1,575)	2,075 00	1,975 00
Fellow		500 00
Temporary Instructor in Italian	150 00	
Temporary Instructor in Spanish	150 00	
	2,375 00	2,475 00

DETAILED ESTIMATE OF EXPENDITURE, YEAR 1895-6. *Continued.*

Salaries.	Estimated amount, year ending 30th June, 1896.	Amount paid year ending 30th June, 1895.
	$ c.	$ c.
6. Teaching staff, etc., University of Toronto—*Continued.*		
(*i*) Logic and Metaphysics:		
Lecturer and Demonstrator in Psychology (salary at $1,200, for three months $300; at $1,500, for nine months $1,125) ..	1,425 00	1,200 00
Lecturer in Philosophy (salary at $800, for three months $200; at $1,000, for nine months $750) ..	950 00	775 00
	2,375 00	1,975 00
7. Teaching staff, University College:		
(*k*) Ethics:		
Professor ..	3,000 00	3,000 00
	3,000 00	3,000 00
(*l*) Greek:		
Professor ..	3,200 00	3,200 00
Lecturer (salary at $800, for three months $225; at $1,100, for nine months $825)	1,050 00	875 00
	4,250 00	4,075 00
(*m*) Latin:		
Professor (salary at $1,500, for nine months)	1,875 00	1,308 32
Lecturer (salary at $1,100, for three months $275; at $1,300, for nine months, $975)	1,250 00	1,075 00
Fellow		312 50
Temporary Lecturer	450 00	500 00
Temporary Lecturer ..	450 00	
	4,025 00	3,195 82
(*n*) Oriental Literature:		
Professor (salary at $2,700, for three months $675; at $2,800, for nine months $2,100	2,775 00	2,650 00
Former Lecturer (salary at $1,000, for three months)	250 00	975 00
Temporary Lecturer (salary at $800, for nine months)	600 00	
	3,625 00	3,625 00
(*o*) English:		
Professor	3,200 00	3,200 00
Lecturer	1,800 00	1,775 00
	5,000 00	4,975 00
(*p*) French:		
Associate Professor (salary at $2,000, for three months $500; at $2,100, for nine months $1,575)	2,075 00	1,975 00
Lecturer (salary at $1,100, for three months $275; at $1,300, for nine months $975)	1,250 00	1,075 00
Fellow		500 00
Temporary Instructor	300 00	
	3,625 00	3,550 00
(*q*) German:		
Associate Professor (salary at $2,100, for three months $525; at $2,800, for nine months $2,100)	2,175 00	2,075 00
Lecturer (salary at $1,100, for three months $275; at $1,300, for nine months $975)	1,250 00	1,075 00
Temporary Instructor ..	500 00	500 00
	3,925 00	3,650 00
8. Gymnasium:		
Instructor (salary at $800, for nine months)	600 00	
Caretaker ..	500 00	375 00
	1,100 00	375 00

DETAILED ESTIMATE OF EXPENDITURE, YEAR 1895-6.—*Continued.*

Expenses.	Payable out of interest on special funds.	Paid out of ordinary revenue.	Amount paid 1894-95.
	$ c.	$ c.	$ c.
2. Bursar's office (exclusive of salaries now on salary list):			
Allowance to cover gas, fuel and attendance			100 00
Stationery, printing, postage and incidentals		700 00	622 03
Allowance for rent of office			400 00
Auditor		300 00	300 00
		1,000 00	1,422 03
3. Expenses *re* investments, etc.:			
Law costs		500 00	686 64
General incidentals (including commission on loans)		300 00	361 49
		800 00	1,048 13
4. Scholarships and Fellowships:			
(*a*) Scholarships:			
Junior Matriculation:			
1. Prince of Wales	50 00		50 00
Edward Blake Scholarships:			
1*a*. General Proficiency	60 00		60 00
2. "	42 50		42 50
3. "	25 00		25 00
4. "	22 50		22 50
5. "	20 00		20 00
6. "	17 50		17 50
7. "	15 00		15 00
8. " West Durham	25 00		25 00
1. Classics and Mathematics	60 00		60 00
2. "	20 00		20 00
1. Classics and Moderns	60 00		60 00
2. "	42 50		42 50
3. "	20 00		
4. "	17 50		
1. Mathematics and Moderns	60 00		60 00
2. "	20 00		20 00
1. Mathematics and Science	60 00		60 00
2. "	20 00		20 00
1. Moderns and Science	60 00		60 00
2. "	20 00		
1. Mathematics	60 00		60 00
2. "	15 00		15 00
1. Moderns	60 00		60 00
2. "	15 00		15 00
1. Science	60 00		
2. "	15 00		
1. Classics—Mary Mulock	60 00		60 00
2. " "	60 00		60 00
First Year:			
Classics (Moss Scholarship)	60 00		60 00
Modern Languages (Blake Scholarship)	60 00		60 00
Mathematics and Physics (Fulton Scholarship)	60 00		
Natural Science (Fulton Scholarship)	60 00		
Chemistry and Mineralogy } (Fulton Sch'rship) Chemistry and Physics }	60 00		
Political Science (Banker's Scholarship)	70 00		70 00
Second Year:			
Classics (William Mulock Scholarship)	60 00		60 00
Modern Languages (George Brown Scholarship)	60 00		60 00
Political Science (Alexander Mackenzie Scholarship) No. 1	75 00		
Political Science (Alexander Mackenzie Scholarship) No. 2	50 00		

DETAILED ESTIMATE OF EXPENDITURE, YEAR 1895-6.—*Continued.*

Expenses.	Payable out of interest on special funds.	Payable out of ordinary revenue.	Amount paid 1894-95.
Scholarships.—*Continued.*	$ c.	$ c.	$ c.
Second Year:			
Philosophy (John Macdonald Scholarship)	50 00		50 00
Mathematics and Physics (William Mulock Scholarship)	60 00		60 00
Natural Science (Blake Scholarship)	60 00		60 00
Chemistry and Mineralogy Blake Scholarship)	60 00		60 00
Chemistry and Physics (Blake Scholarship)	60 00		60 00
Third Year:			
Classics (Moss Scholarship in 1896, William Dale Scholarship in 1895)	60 00		60 00
Modern Languages (Julius Rossin Scholarship)	60 00		
Ethics (John Macdonald Scholarship)	50 00		60 00
Political Science (Alexander Mackenzie Scholarship) No. 1	75 00		
Political Science (Alexander Mackenzie Scholarship) No. 2	50 00		
Mathematics and Physics (A. A. A. S. Scholarship)	75 00		75 00
Natural Science (Daniel Wilson Scholarship)	60 00		60 00
Chemistry and Mineralogy (Daniel Wilson Scholarship)	60 00		60 00
Chemistry and Physics (A. A. A. S. Scholarship)	70 00		70 00
Post Graduate:			
Political Science (Ramsay Scholarship)	60 00		60 00
Medicine (Brown Memorial Scholarship)	300 00		
(*b*) Graduate Fellowships:			
Alexander Mackenzie Graduate Fellowship in Political Science	375 00		375 00
Alexander Mackenzie Graduate Fellowship in Political Science	375 00		375 00
	3,657 50		2,745 00
5. Examiners:			
Arts		4,650 00	4,764 13
Medicine		1,100 00	1,088 50
Law		140 00	126 00
Engineering and Applied Science		100 00	100 00
Dentistry		230 00	220 50
Agriculture		300 00	247 50
Music		100 00	60 00
Pharmacy		300 00	265 78
Pedagogy		180 00	180 00
Matriculation		400 00	387 45
		7,500 00	7,439 86
6. Insurance:			
For three years $4,776 52. Proportion charged to revenue of 1895-6		1,592 17	1,592 17
		1,592 17	1,592 17
7. Telephones:			
University (main building)		30 00	30 00
Library		45 00	45 00
Biological building		30 00	30 00
Bursar's office		45 00	45 00
		150 00	150 00

DETAILED ESTIMATE OF EXPENDITURE, YEAR 1895-6.—*Continued.*

Expenses.	Payable out of interest on special funds.	Payable out of ordinary revenue.	Amount paid 1894-95.
	$ c.	$ c.	$ c.
8. Library (exclusive of salaries) :			
Customary grant	1,100 00	1,500 00	2,686 34
Maintenance : Fuel		280 00	334 01
Water		40 00	21 93
Gas		10 00	5 18
Cleaning		215 00	196 50
Incidentals		100 00	288 56
Repairs		150 00	
	1,100 00	2,295 00	3,532 52
9. Main building :			
(*a*) Maintenance—Repairs (carpentry and plumbing, occasional labor and sundries)		1,200 00	1,437 44
Fuel		1,850 00	2,139 47
Water		240 00	227 00
Gas		75 00	54 32
(*b*) Registrar's office		50 00	110 00
		3,415 00	3,968 23
10. Grounds :			
Occasional labor, roads, fences, sidewalks, etc. (including fencing of Devonshire Place, $465)		2,000 00	2,594 78
11. Chemical Department :			
(*a*) Maintenance of Structure—Fuel		400 00	
Gas		300 00	
Water		125 00	
Cleaning materials		100 00	
Cleaning assistance		100 00	
Repairs and incidentals		75 00	
		1,100 00	
(*b*) Maintenance of Department—Chemicals, etc		400 00	496 26
		400 00	496 26
12. Biological Buildings : Maintenance of structure—			
Fuel		600 00	692 31
Gas and electric light		160 00	157 48
Water		100 00	104 28
House furnishings and cleaning materials		150 00	154 00
Repairs, including carpentry and plumbing		300 00	232 37
Gas and electric light fittings			131 20
Additional attendance and cleaning assistance (exclusive of mineralogical and anatomical rooms)		225 00	211 90
		1,535 00	1,683 54
Biological Department :			
Laboratory—lecture room and Museum supplies		450 00	421 27
Students' laboratory supplies		879 25	807 00
Physiology maintenance		130 00	292 07
		1,459 25	1,520 34
13. Physical Department :			
Maintenance—Supplies		325 00	328 22
Apparatus		500 00	
		825 00	328 22
14. Mineralogical and Geological Department :			
Supplies and sundries, including students' supplies		200 00	180 28
Minerals (addition to Ferrier collection)		117 49	
		317 49	180 28

DETAILED ESTIMATE OF EXPENDITURE, YEAR 1895-6.—*Concluded.*

Expenses.	Payable out of interest on special funds.	Payable out of ordinary revenue.	Amount paid 1894-95.
	$ c.	$ c.	$ c.
15. Psychological Department :			
Maintenance		350 00	200 00
16. Mathematics		150 00	106 35
17. Political Science :			
Class room supplies		50 00	
Books for departmental Library		125 00	
		175 00	
18. Classics :			
Latin—class room supplies		20 00	12 00
19. English :			
Class room supplies and provision for reading of essays		200 00	
20. French :			
Books for class room use		21 00	6 77
21. German :			
Books for class room use			
22. Italian and Spanish :			
Books for class room use		20 00	5 75
23. Oriental Literature :			
Books for class room use		20 00	11 31
24. Stationery (University) :			
Office supplies, papers for examination, postage, etc.		1,100 00	1,035 24
25. Printing (University)		2,750 00	2,910 96
26. Advertising (University)		300 00	297 65
27. Incidentals (University)		150 00	132 20
28. Stationery (University College)		100 00	64 15
29. Printing (University College)		100 00	96 55
30. Advertising (University College)		75 00	65 50
31. Incidentals (University College)		75 00	56 50
32. Convocation expenses		125 00	110 10
33. Senate Elections :			
Allowance to scrutineers		200 00	
Postage, printing and incidentals		225 00	
		425 00	
34. Gymnasium and Students' Union :			
Fuel		250 00	206 65
Water		120 00	
Gas		50 00	18 80
Cleaning		80 00	
Repairs		100 00	523 10
Incidentals		175 00	
		775 00	748 55

Toronto, 11th December, 1895.

James Brebner, Esq., B. A.,

Registrar, Universtty of Toronto.

Dear Sir,—At a meeting of the Board of Trustees, held to-day, the draft Report of the Council of University College and of the Committee of the Senate on Finance, containing estimates of revenue and expenditure, and the Committee's observations on various matters, was read, and, on motion of Mr. Walker, the Report was approved by the Board.

Yours truly,

J, E. BERKELEY SMITH,

Bursar.

ANNUAL REPORT

OF THE

CLERK OF FORESTRY

FOR THE

PROVINCE OF ONTARIO

1896.

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PARLIAMENT BUILDINGS, MAY 1ST, 1896.

The Honorable A. S. HARDY, M.P.P.,
Commissioner of Crown Lands.

SIR,—I have the honor to transmit herewith my report on Forestry in Ontario for the year 1896, being the first since my appointment to the vacancy occasioned by the decease of the Hon. C. F. Fraser. As a considerable interval elapsed between the death of the previous incumbent, Mr. R. W. Phipps, and the appointment of Mr. Fraser, who held the office for a very brief term, the report now presented is the first that has been issued since that of 1891. It comprises the following features:

A general review of the progress and present position of the science of Forestry;

An account of the more important developments in connection with practical Forestry in the United States;

The Forestry problem in Ontario in its broader aspects as concerning the Crown domain and the policy of establishing forest reserves;

A reference to Algonquin Park and re-forestation experiments therein;

An inquiry into the working of the Ontario Tree Planting Act of 1883 and subsequent legislation based thereon;

The result of investigations as to the observance of Arbor Day in the schools of Ontario;

An inquiry into the effect of clearing the forests in Southern Ontario upon the water supply in that part of the Province;

A paper upon Forestry for farmers, pointing out how they can best preserve and use their wood lot and utilise to advantage such areas as are least adapted for general agriculture by planting forest trees;

A report of a visit to the various industries of the Rathbun Company at Deseronto in which timber of various sorts is largely consumed;

Some statistics connected with our great lumbering industries and figures relating to the growing consumption of timber in the manufacture of paper pulp;

Special articles on the manufacture of charcoal and on the cultivation and economic value of some of our native forest trees, kindly contributed by Mr. A. Kirkwood of the Department of Crown Lands, together with several other papers treating various aspects of Forestry or Sylviculture.

So far as the resources at my disposal would admit, I have endeavored to present, in a clear and succinct form, the most important results of modern scientific research and experiment bearing upon the question of forest preservation and reproduction, with a view to their practical application in perpetuating and increasing the great timber resources of Ontario, as well as restoring the due proportion of wooded to cleared land that has ceased to exist in some portions of the Province.

I have the honor to be, Sir,
Your obedient servant,

THOMAS SOUTHWORTH,
Clerk of Forestry.

INTRODUCTION.

With the appointment of the present incumbent to the position of Clerk of Forestry, the office, formerly under the Department of Agriculture, was attached to the Department of Crown Lands, and brought under closer supervision of the Government than was previously the case. This change indicates an alteration in the policy of the Government in recognition of the growing importance of the question of forestry. The position, the duties of which in its earlier stages had been altogether educational, is now entrusted, to some extent, with the wider and more important functions of forestry proper in relation to the Crown domain. In place of an official dealing almost entirely with such minor phases of the problem as can be reached by individual or local action for the promotion of tree-planting, the change contemplates the establishment of a bureau under the direct control of the Department, with a well-defined sphere in the work of administration.

Though the policy of the Government in this regard has not been fully developed, the character of the work accomplished during the last few months will indicate in a measure the enlarged scope of the operations of the Bureau of Forestry. With the continued development of the country, the rapid extension of settlement, the increased demand for forest products—the augmentation in short, of all those factors and considerations which have forced the question of forest preservation upon public attention, the time for mere argument and exhortation has passed, and public opinion is fully prepared to support systematic government action. The expansion of the policy inaugurated by the setting apart of Algonquin Park, having for its object the preservation of large areas of land permanently in timber, and treating the forest as a continuously productive source of wealth will place the Province in line with other progressive communities which pursue the same course. The investigations necessary as a preliminary to the application of forestry conditions to a widening area of the Crown domain, with a due regard for the extensive industrial interests involved, is naturally the most important task before the Bureau. But while the larger aspects of forestry have been steadily kept in view, it is also the intention to make the Bureau of Forestry a centre of information in regard to all subjects bearing upon the planting and care of forest trees, and the extent, utility and location of our forest resources. During the past few months there has been an increasing volume of correspondence with those desiring information on such matters. This feature of the work is likely to have important practical results in promoting those industries dependent upon forest products. One case in particular may be men-

tioned in which enquiries were made of the Bureau as to the process of manufacturing birch oil, which can be profitably extracted from the waste usually left by the lumbermen in taking out birch timber. As the result of an article furnished the *Canadian Manufacturer* and copied into other journals, the inquiries concerning the process have been numerous, and although the price of the article has fallen, owing to the manufacture of an artificial product from acid and wood alcohol, several plants are likely to be established.

A correspondence with Mr. Harrison Watson, the Canadian Curator of the Imperial Institute, leads to the belief that our exports of manufactures of wood to Great Britain may be materially increased.

It is hoped that when the Bureau is more thoroughly equipped than at present with facilities for furnishing full and accurate information respecting the distribution and economic value of our woodland resources, it may be the means of stimulating other enterprises for turning to account much of our forest wealth that is now considered waste material.

THE FORESTRY PROBLEM IN THE CROWN FORESTS.

There is probably no science which has made more rapid advances within a few years than that of forestry. Hardly more than a decade since, all knowledge of or interest in the subject on this continent, was confined to a very few scientific experts and enthusiasts, whose views were regarded as of doubtful value or practicability. The literature of the subject was scanty and inaccessible, such works as were procurable having principally reference to European conditions, and consequently being but slightly applicable to the problem as presented on this side of the Atlantic. The great mass of the people, including the educated classes, the legislators and moulders of public opinion, though they might have heard vaguely of forestry, and become aware that a theory existed to the effect that unfavorable climatic changes were the result of over-clearance, never considered it as a question requiring urgent attention or likely to come within the scope of legislation. While admitting, perhaps, the evils of indiscriminate deforestation, the ready and obvious answer to all suggestions looking to a reversal or limitation of the process, that the forest must be cleared before crops could be grown, was deemed conclusive, if not altogether satisfactory.

To-day there is a marked change in public opinion. Forestry is no longer a mere empirical study, but has taken its place among the recognized sciences. Hundreds, probably thousands, possess a knowledge, in outline, of its leading principles to one who was thus far familiar with its teachings in the early eighties. Its qualified exponents are actively spreading their views through the press, in official documents and by means of lectures and addresses. In the United States it has won recognition at the hands of the Federal Government as well as the governments of many States, and, in addition to the valuable educational work performed, measures have been passed for the setting apart of large areas of the national domain in appropriate localities as parks and reserves, and for the encouragement of tree planting. Forestry associations have been organized on an extensive scale, which have contributed much to the dissemination of a general knowledge of the principles of forestry and sylviculture, and to the formation of an enlightened public sentiment on the subject. It has an extensive and increasing literature dealing with its varied aspects from the point of view of local surroundings, requirements and possibilities, and, in addition to scientific and practical works of a permanent character, the magazine and newspaper press publish frequent articles on forestry topics, and chronicle every important new development of the question. The observance of Arbor Day in the schools in many portions of Canada and the United States, perfunctory though it may be in too many cases, is never-

theless calculated to foster in the coming generation an appreciation of the value of trees and the importance of their preservation, to which their elders were strangers. In short, forestry, in place of an abstract and debatable theory, has become a vital and urgent economic problem, continually engrossing a larger share of the attention of the most intelligent and public-spirited members of the community.

The reason for this change is not far to seek. The question of the preservation of the forests has simply been forced upon public attention by the sheer necessities of the case. With the steady expansion of the settled and cultivated area and the growth of population, the evils resulting from deforestation have become greatly intensified. The climatic changes foreshadowed by the earlier students of the subject as the inevitable result of the reckless destruction of the woods, have been developed in large measure, and the lessons of practical experience have brought conviction to those who would have been impervious to the universal teachings of history. Almost every spring now brings calamitous floods and freshets down the water-courses, along which the streams, fed by the melting snows and the spring rains, formerly flowed gradually away. Periods of protracted drought during mid-summer, are much more severe in their effects. The sweep of the winter winds over large cleared areas of country, in many localities, renders difficult and precarious the growth of some crops once profitably cultivated. The largely increased demand for timber for manufacturing purposes is met by a rapidly diminishing supply. The prospect of the further deterioration of the soil and climate, and the exhaustion of the once vast and supposedly illimitable timber resources of the continent, has naturally induced a close study of the causes of conditions so unfavorable to future prosperity and industrial development. The result, as pointed out, has been the widespread recognition of the long-ignored truth, that only by the preservation of a due proportion of the land in forest for all time, is it possible to secure either agricultural fertility or a lasting supply of timber.

The object of forestry is two-fold. Hitherto, so far as this continent, at least, is concerned, it has usually been considered merely as a means of ensuring favorable agricultural conditions and preventing the deterioration of soil and climate. We have been so habituated to regard the forest wealth of America as practically inexhaustible, that while the disastrous effects of forest destruction upon agriculture forced themselves upon the attention of the public, and procured a receptive hearing for forestry proposals as a remedy for these very obvious evils, the other, and more important aspect of the subject, has hardly been accorded its due weight. Apart altogether from the influence of the forests in distributing moisture, regulating temperature, and in other ways maintaining favorable conditions for cultivation, the industrial interests of the country imperatively require their preservation as a perpetual source of timber supply.

The forests of America, as a matter of fact, are very far from being inexhaustible, so far, at least, as the finest and most useful kinds of timber are concerned.

With the development of the country, moreover, the home demand for timber and wood products of all kinds is proportionately increasing, and as our United States neighbors are using up their forest supplies much more rapidly than ourselves, increased requirements for shipments across the line will soon enhance the value of our timber products. How extensive that demand is likely to be in the near future, and what inroads it will make upon our supplies, may be in a measure estimated from the report of Prof. B. E. Fernow, Chief of Forestry Division at Washington for 1893, in which he states that the consumption of wood in the United States is more than fifty per cent. over what their forest area could produce as an annual yield, and that the demand for wood material increases at the rate of over twenty-five per cent. every ten years. It requires, therefore, no great foresight to understand that in the course of the next generation the price of wood, especially of the more valuable kinds, is certain to rise enormously. As our staple manufacturing and mechanical industries are largely dependent upon an adequate and cheap timber supply, the preservation of this prominent factor in our national wealth is an equally important aim of forestry with the coincident benefit to agriculture.

Forests as Capital.

Owing to the lavishness of nature beyond all immediate requirements, and the early necessity of rapid clearance of the woods to provide for cultivation Canadians have become habituated to wasteful methods of lumbering. Under the influence of old associations and conditions we are accustomed to regard the axe as the precursor of the plough and to look upon forest utilization as synonymous with forest destruction. Current discussion respecting the timber policy of the Dominion and Provincial Governments illustrates this habit of thought. The timber resources belonging to the public are correctly enough spoken of as "capital," but when it is sought to turn these resources to practical account it is often charged that in so doing the Government are "drawing upon their capital." There is no reason why this form of capital, like others, should not perpetually reproduce itself and yield ample interest from year to year without diminishing or impairing the original endowment. Judicious forest management involves no waste of capital. To preserve the forests, in the sense of leaving them untouched, is a waste from year to year of their natural increase, as the trees pass through the stage of maturity to decay and death. Without the interference of man there is a constant consumption of forest products by the decomposition of the trees which have reached their term of existence, the only difference being, that under a regime of practical forestry, such trees, when they

had reached their prime, would be selected for removal while under natural conditions their decadence is gradual. To allow the forest trees to mature and decay under the erroneous idea that thereby timber resources were being husbanded for the future would be a waste.

The Forester's Aim.

The object of the forester is the economical harvesting of a wood crop in such a way that it will be succeeded by another similar crop in the shortest possible time, having also in view the incidental effect on climate and water supply. How best to accomplish these ends depends on the location of the lot, the kinds of trees composing the crop and other circumstances. To pursue a little further the frequently employed simile before referred to, a forest left entirely to Nature may be compared to uninvested, locked-up capital, yielding no return to the owner; a forest recklessly exploited, growing upon land unsuited for cultivation, to squandered capital; and a forest judiciously operated by modern forestry methods, crop succeeding crop, to capital wisely invested and producing an annual revenue without impairment of the original sum. The experience of every European country, where the value of timber and the comparatively small extent of forest land in proportion to population, render economical management of the forests imperative, has abundantly proved, that the conservation of the woodland can be made financially profitable notwithstanding the difference in conditions often cited as a reason why the forestry methods of Germany, France and Austria are at present inapplicable to America. There are not wanting experiments under private direction to show that similar results are attainable on this continent. Mr. George W. Vanderbilt's large estate at Asheville, North Carolina, comprising a forest area from which the valuable timber had been cut in the usual fashion and its place partly taken by second growth, was some years ago put under strict forestry management under the direction of Mr. Gifford Pinchot, a professional forester of New York city, and according to the latest returns, has already begun to show a favorable balance on the yearly operations.

Forestry and Agriculture.

Scientific opinion, as has been intimated, is practically unanimous as to the great value of forests in preserving climatic conditions suitable for agriculture, and the dangers attendant upon over-clearance. The frequently-quoted utterances of Marsh, Reclus and others which have become embodied in the literature of forestry have been re-enforced by a large number of later writers of acknowledged scientific standing, who have furnished from the results of later observation and experiment, additional data to fortify their conclusions. Prof. T. G. Bonney, of University College, London, in his work, "The Story of Our

Planet," published in 1893, says (page 574), "The necessity of clearing the land for cultivation, or the greed of gold causes the wholesale destruction of forests. By this not only is the rainfall affected, but also when the shower falls, the water, instead of sinking quietly into the ground, collects into rivulets and quickly tears away the soil now unprotected by the leaves and no longer bound together by the roots of trees. Torrents of mud and gravel go raging down the ravines, chocking the channels of the lowland rivers and flooding the plains with the debris of the mountains. * * In parts of Europe and Asia the mischief which has been wrought by the reckless destruction of the forests, especially in the mountain regions, is almost beyond calculation; parts also there are of North America which will have to pay the penalty for a like ill-doing."

A very full and clear presentation of the subject is comprised in a volume entitled "Aspects of the Earth," issued in 1890 by Prof. N. S. Shaler, one of the most eminent and scholarly living authorities, who occupies the chair of geology in Harvard University. His treatment of the general question is so forcible and luminous, and his statement of the specific modern instances in which deforestation has been followed by the most disastrous consequences, so applicable to Canadian conditions, that extensive citations from his pages are well worthy of reproduction here. The learned professor's description of the manner in which the denudation of their borders has affected the Ohio and Mississippi Rivers is specially instructive as presenting in a considerably intensified form the same features which have been long noticeable in connection with our Canadian water-ways, to the injury of navigation and, in larger measure, the detriment of agricultural and industrial interests. Speaking (page 185) of the influence of human action in modifying physical conditions, he says:

Nowhere else in the physical machinery of our earth is the influence of the hand of man so well shown as in the condition of rivers. Nowhere else is his destructive or conservative powers so important. The effect of man's action upon rivers is in the main due to the fact that his occupancy of the earth leads to the removal of its forest covering. We have already incidentally noted the relation of trees to the immediate bounds of a stream. We have seen that the woods are continually pressing upon the margins of a river, causing it to sway to and fro, and tending always to narrow its channel. This is only one, and perhaps the least important, of the effects exercised by forests on the regimen of the greater streams. It is necessary to consider the action of forests over the whole basin of a river in order to see the magnitude of their influence on the action of these waters.

The valleys of most rivers are forest-clad. Whether these forests have the gigantic growth characteristic of fertile districts in the tropics and the temperate zones, or take the shape of stunted woods such as extend far toward the poles, they in all cases form beneath their branches and above the soil, a thick spongy coating, which affords a natural reservoir for the rain waters. In most regions this forest sponge has a depth of more than a foot, it not infrequently attains a thickness of two feet or more. It can commonly take into its interstices a rainfall of three or four inches in depth, or from one-sixth to one-tenth the ordinary annual supply. This water is slowly yielded to the brooks it often requires

weeks for a single torrential rain entirely to escape into the open channels which bear it to the sea. Moreover, the fallen trunks and branches of the trees clog the forest-shaded rivulets, making little pools which serve still further to restrain the outgoing of the waters. Our beavers, at one time the most widely distributed of our larger animals, at first making avail of these natural ponds formed by fallen timber, learned in time to construct more artful dams, so as to retain extensive basins of water. Thus in the natural condition of the North American rivers, as well as those of most other countries, before man began to clear away the forests, the woods constituted a great system of reservoirs, in which the rains were retained into the period of intervening droughts. In this state of the surface the main channels of a river system were continually the seat of streams of moderate flow. These channels were no wider than was required by the rate at which these forest-impounded waters escaped.

When man resorted to the soil as the source of his food he began to clear away the forests, and by tillage, to destroy the spongy covering of the earth which they created. With the advance of civilization all the great valleys of the northern temperate zone have been to a considerable extent deprived of their forest covering. In this new state of the surface the rain-water is no longer held back as it was of old, but flows quickly over the surface of the soil and enters the waterways. The result is that all the old channels bear in times of flood a body of water far greater than that which was put into them before the forests were cleared away. They have been compelled to widen their channels by cutting away a strip of the alluvial land on either side. Thus, in the case of the Ohio river the bed occupied by the flood waters, has, since the beginning of the present century, been widened to about one-fifth of its total diameter. Despite this widening it is now unable to bear away the flood waters yielded to it by the extensive tilled surfaces of its basin. In times of flood it rises higher than of old and spreads devastation over a wider area of the alluvial plains. In times of drought the stream shrinks within its waste of encumbering sands and becomes unnavigable.

In the present condition of the Mississippi Valley, these floods and droughts seriously affect the condition of man. There, as in all other civilized countries, the great seats of population tend to gather on the river banks. The alluvial lands are in all cases singularly fertile, and the streams themselves afford natural ways of transportation, the value of which does not seem to become lessened by the great extension of railway systems. In the present condition of these valleys the fitness of these streams for navigation is progressively diminishing, for both in times of flood and in periods of drought they are unsuited to the uses of commerce. Moreover, in the flood periods, the streams are a very serious menace to all the towns which are gathered along the river banks. As yet we have only seen the beginning of these evils, for notwithstanding the extensive settlements in the Mississippi Valley, more than half their original forest covering remains. When, with the rapid increase of population, these river basins become as thoroughly subjected to the uses of man as those of Europe we have yet greater ills to apprehend * * * *

In endeavoring to meet the evils which arise from the removal of forest-covering from the surface of a country, we find that the difficulties to be considered are as follows:—First, those which arise from the diminished restraint put upon the movements of the water which comes to the earth's surface in times of heavy rain or of melting snow. Next, the evils due to the rapid wasting of the soil, which, in its unprotected condition, is readily washed into the stream beds. The first of these evils gives rise to serious destruction of wealth, and to the interruption of industries. The second threatens the loss of that

precious soil covering on which depends the relation of all land life, that of plants and man and beast, to the surface of the earth. It is clearly evident that we cannot hope to preserve any considerable portion of our forest lands from destruction. The need of subsistence such as is drawn from the soil is immediate and overwhelming. During the last century Europe has been able to preserve a portion of its forests, and indeed to win extensive areas back to the condition of woods, for the reason that it could draw supplies of food from this country, but when our American soils are occupied it does not seem likely that other parts of the world will afford any such opportunity for obtaining foreign grain. At most we may expect that a small area, perhaps not exceeding one-tenth of our orginal forests, may be retained in their present shape in order to afford supplies of timber. It is therefore necessary if we have to control these flood waters at all, to devise some means by which we may imitate the old natural system of water storage which the primeval woods afforded. There is but one method by which this end may be accomplished, viz.: by creating artificial reservoirs in which the waters may be for a time retained during the period of floods.

The opinion of Prof. Shaler that the retention of any considerable portion of the area of the United States in forest is impossible, may or may not be justified. It is, at any rate, open to question. It is doubtful whether, assuming all the land in the humid or sub-humid regions of the United States to be arable, more wheat could not be raised, on say three-quarters of the land, with the remainder in forest, than could be produced over the total area with forests absent or nearly so. Prof. Shaler, however, proceeds on the assumption that re-forestation in the United States is not likely to be accomplished to any extent, and hence, as a means of arresting the loss of the Mississippi Valley, the soil of which is being rapidly washed into the Gulf of Mexico, he proposes as a substitute for nature's plan of holding back the moisture, a series of reservoirs to catch the water in time of flood, and let it gradually run off. This plan, while admittedly not so effective as a good system of forest reservoirs, would be very expensive. Prof. Shaler estimates that for an efficient system of reservoirs for the Mississippi Valley, and the valleys of the other large tributaries of this river, a capital expenditure of at least one hundred million dollars would be required, and the tidy sum of ten millions a year would be needed for operating expenses. While admitting the enormous cost, which he thinks justifiable from the benefits to be obtained by this plan, Prof Shaler goes on to say:

It seems, however, possible that for this cost we might obtain a substantial immunity from the worst destruction accomplished by our floods. Even if this system should be adopted, it would be necessary, decade by decade, as the process of forest removal advanced, to extend still further the area of the storage reservoirs. While the proper control of the Mississippi drainage system is of great importance to the nation at large, to the States which border upon its waters it is a matter of vital necessity. Whether this great task is to be undertaken by the Federal government or by associated commonwealths, there can be no question that it should be at once entered upon. Every year increases the magnitude of the necessities and the difficulty of devising means to meet them.

The significant feature of all this, in its bearing upon the problem in Canada, is its estimate of the enormous expenditure entailed by the system necessary to partially overcome the worst effects of forest destruction.

The outlay at first hand of one hundred million dollars, to be followed up by a continuous yearly expenditure of ten millions required to keep in bounds the floods which devastate the Mississippi, will only check future ravages. It will not restore to the alluvial plains the lost fertility of the soil, or replace the rich covering of vegetable mold, the product of the growth and decay of centuries of forest crops, which has been washed by millions of tons into the Gulf of Mexico.

The object lesson taught by the French Alps and other mountainous regions in Europe is an old and oft-repeated one. It is perhaps hardly surprising if, owing to the distance and dissimilarity of conditions, it has not been effective in inspiring on this side of the Atlantic a realizing sense of the need of forest preservation. It ought surely to be otherwise when we have the warning before us, conveyed by the experience of our neighbors under circumstances much the same as those prevailing in the Dominion. If we would not pay the penalties which they have incurred by their violation of natural economic laws, we must, while there is yet time to avert the graver damages which threaten, abate a process of destruction which, fortunately for us, has so far been less thorough and widespread than that incited by the greater population and intense competition of the United States.

Prof. Shaler emphasizes one feature upon which sufficient stress has hardly been laid in treating of the evil effects of forest destruction in America, namely, the absolute loss of the surface soil from washing away by floods. Those unacquainted with the facts may not unnaturally suppose this result to be confined to mountainous or broken regions of country, where the floods take the form of torrents pouring down steep hill sides or ravines, and sweeping rocks and debris before them. As the author's elaborate survey of the whole process of the formation of the covering of vegetable mould and the effect upon it of the rainfall clearly shows, the erosion consequent upon clearing assumes destructive proportions even in a comparatively level country.

Forests and Rainfall.

It may here be remarked in passing, that though this author takes very decided ground as to the effect of the forest in increasing the actual volume of the rainfall, the question is one upon which some difference of opinion still exists among meteorologists. As all rainfall is dependent upon evaporation, and no drop of water can possibly fall anywhere upon the earth's surface that has not first been drawn from it, it is urged that the aggregate evaporation, which is mainly from the ocean, the great lakes and other bodies of water, cannot possibly be affected by

the transpiration through the leaves of trees to such an extent as to appreciably increase the rainfall. On the other hand, the evaporation of moisture due to the presence of forests is very great. Aside from the longer retention of the water in a forest floor, allowing it to evaporate gradually, instead of running at once to the streams and the sea, the amount of moisture transpired through the leaves of a large and healthy tree is much larger than is generally supposed.

Some idea of the surprising quantity of the moisture given out to the atmosphere by wooded tracts may be obtained from a statement by the late Prof. Asa Gray, to the effect that a single tree, "the famous Washington elm at Cambridge, Mass., had been estimated to produce 7,000,000 leaves, which would contain a surface radiation of about five acres in extent and give out every fair day in the growing season seven and three-fourths tons of moisture." Elaborate investigations of the subject were made by the Austrian forest experiment stations in 1878, which present some surprising results. A beech tree from fifty to sixty years old was found to have 35,000 leaves, with a dry weight of 986 pounds; a transpiration at the rate of 400 pounds of water per dry leaf pound during the period of vegetation would make the total transpiration 3,944 pounds per tree, or about 22 pounds daily. Allowing 500 such trees to the acre, the transpiration per acre would amount to 1,972,000 pounds, while the rain precipitation during the same period would be 2,700,000 pounds. According to a series of observations made by Dr. Evermayer for the Bavarian government, the total volume of evaporation from a forest area, including transpiration, exceeds by 51 per cent. the evaporation from a water surface in the open.

Other observers have come to the conclusion that, at certain times, the evaporation from trees is far greater than that from an equal area of open water while at other times it is less. The amount of moisture drawn into the atmosphere from a given body of open water, depends, not on the bulk of the water, but on the extent of the surface area. Thus, a rise in the level of Lake Ontario will not increase the volume of vapor arising from it. The evaporation from an open country immediately after a heavy rain will be very great, but diminishes to a large extent with the drying of the surface, which soon takes place provided it is exposed to the action of the wind and the sun. On the other hand, in addition to keeping the rain and the melted snow from pouring at once into the streams, and thus lengthening the period of evaporation, trees send their roots deep down into the moist earth, and draw up enormous quantities of water, most of which is transpired through their leaves, and must add very materially to the total amount of moisture in the air.

Leaving future scientific observations to settle the question of the exact effect of forests on the total of the world's rainfall, the writer is firmly of the opinion that the presence of trees in large masses has a great deal of influence on its distribution. Areas entirely destitute of trees are more subject to drought

than districts in which there is a proper proportion of wooded land. The summer of 1895 was an exceptionally dry one in many parts of Ontario, and it is worthy of note that the section of the Province which suffered most severely from the want of rain, was the region that, according to the assessment returns of the Ontario Bureau of Industries, has been the most completely denuded of its timber.

In a bulletin issued by the United States Division of Forestry in 1893, there is an account of meteorological observations at Lintzel in Germany, the result of which points to the conclusion that the covering of a prairie or treeless country with forests, increases the rainfall over that area.

The observatory station of Lintzel is situated in the Luneburg heath which was planted to forest, commencing in 1877, at the rate at first of 1000 to 1500 acres per year, afterwards more slowly. In the course of nine years there were over 8000 acres planted to forest. The meteorological station is placed in an open field of about seventy-five acres surrounded by the new forest. Before re-forestation the area was made up as follows: twelve per cent field, meadow, etc; eighty-five per cent. heath; three per cent. old forest. These proportions have been changed by re-forestation to ten per cent. field, meadow and water; ten per cent. heath, roads and openings; eighty per cent. forest. The rainfall observations are compared with those at stations outside of forest conditions but near enough to Lintzel to be available for comparison. The rainfall at Lintzel as compared with the precipitation at other stations for the nine years is as follows:

*Rainfall at Lintzel calculated as percentage of rainfall at certain places.

Year.	Bremen.	Hamburg.	Oslebs-hausen.	Luneburg.	Gardelegen.
	per cent.	per cent.	per cent.	per cent.	per cent.
1882	64.5	80.0	76.4	91.7	96.3
1883	68.7	84.6	81.5	95.7	101.0
1884	77.8	93.8	94.5	103.3	106.7
1885	82.0	95.4	107.1	105.4	109.2
1886	83.9	93.4	107.5	104.1	114.2
1887	96.2	94.2	104.8	103.0	120.2
1888	106.8	92.1	104.9	93.8	120.1
1889	105.9	94.2	.....	.....	.....
1890	101.6	.....	.....	.....	.....

From this it appears that the percentage of rainfall at Lintzel as compared with the other places showed a steady increase in a direct ratio to the increase in the proportion of wooded land. Whatever may be the conclusion finally reached by scientists in this matter, it is of less importance to this Province, than the

* We are indebted to U. S. bulletin on Forest Influences for these particulars.

influence of our forests in controlling and storing up the rain after it has fallen. A labored argument to show that this is a matter of such great and general public concern that every progressive government should recognize forest preservation as one of their duties to the country would be superfluous.

In every civilized community the maxim that "a man may do as he will with his own" is qualified by the limitation that in the exercise of the right of proprietorship he must not injure his neighbor. The case of the California law forbidding the pouring of hydraulic washings into streams to the detriment of the property owners below, is paralleled by our own laws, regulating reparian rights and preventing owners of land, through which a water-course passes, doing anything to impair or deflect the flow in a manner injurious to others. There is no doubt that had the effect of clearing the forests upon streams been understood in the early days of jurisprudence, the powers of the individual owner would have been restricted equally in this respect as in other actions which infringe upon his neighbors' interests.

A paper by Mr. Gifford Pinchot, one of the soundest and most practical of the American writers on forestry, published by the American Economic Associations in 1891, on "Government Forestry Abroad" conveys much pertinent information as to the dealings with private forest owners of the leading European Governments. In treating of Germany he quotes from Donner, the official head of the Prussian Forestry department as follows: "The duty of the State to sustain and further the well-being of its citizens regarded as an imperishable whole, implies for the Government the right and the duty to subject the management of all forests to its inspection and control." This intervention is to be carried, however, "only so far as may be necessary to obviate the dangers which an unrestrained utilization of the forest by its owners threatens to excite, and the rights of property are to be respected to the utmost, consistently with such a result." In practice the restraining influence of the Government is only exerted where the evident results of deforestation would be seriously dangerous. In such cases the woodlands are considered "protection forests" and carefully preserved. As a concession to private rights, however, the State is willing, should the proprietor desire to sell, to buy up areas, not only of protection forest but also of less vitally important woodlands and on the other hand to give up to private ownership lands, which by reason of their soil and situation, will contribute better to the commonwealth under cultivation than as a forest. In this way the forests, the preservation of which is most important, are gradually passing into the hands of the State; yet the total area of its woodlands is increasing but slowly.

In France the provisions of the code concerning private woodlands are substantially as follows:

No private owner may root up or clear his woodlands without having made a declaration of his intention, at least four months in advance. The forest service

may forbid this clearing in case the maintenance of the forest is deemed necessary upon any of the following grounds :

1. To maintain the soil upon mountains or slopes.

2. To defend the soil against erosion and flooding by rivers, streams or torrents.

3. To insure the existence of springs and watercourses.

4. To protect the dunes and seashore against the erosion of the sea and the encroachment of moving sands.

5. For purposes of military defence.

6. For the public health.

A proprietor who has cleared his forest without permission is subject to a heavy fine, and may be forced in addition to replant the area which he has cleared.

That similar legislation has not been adopted in Britain, is probably due less to the strong traditions of individualism than to social and industrial conditions which render it much less imperative than on the continent. In the first place there is less danger from deforestation, as the land is mostly in the hands of large territorial magnates, who, as a rule, carefully preserve a due proportion of woodland, either for sporting purposes or to maintain the fertility of their agricultural lands. The aristocratic principle, whatever its drawbacks and shortcomings, at least seems to inculcate in its representatives a regard for the interests of posterity such as is not conspicuously developed under democratic institutions, and the management of English estates with regard to the distant future instead of making present profit the main or sole consideration has prevented some of the consequences resulting from forest destruction. Moreover the insular position of Britain and the humidity of the climate caused by the precipitation of the vapor from the Atlantic ocean would in any event prevent those serious results caused by the clearing of the woods on extensive inland tracts of land.

A striking illustration of how destructive to national interests the absence of any restriction on the powers of land owners is likely to prove, is found in the case of Russia. In that country the natural conditions are in many respects similar to those prevailing in America, which it resembles, not only in its vast extent and large inland stretches where the modifying influence of the ocean upon climate is little felt, but in its sparse population and the prevalence of extremes of heat and cold. In 1891 Russia was visited by a severe famine caused by the failure of the crops—a calamity specially disastrous in a country in which agriculture is the great staple industry, and the people, dependent upon the home supply are liable, in districts remote from railways, to perish before their needs are known and assistance reaches them from outside. Large numbers died of starvation and diseases induced by lack of adequate nourishment. The *Edinburg Review* for January, 1893, published an article on "The Penury of Russia,"

treating of the causes of its impoverishment and distress in which the principal reason assigned is the indiscriminate cutting of timber which followed the abolition of serfdom. The following are some of the most salient passages of the paper:

Since the emancipation, absenteeism has become general. The annual income of the proprietors was diminished but they got from the Government redemption bonds, which most of them sold, spending the money in the capitals or travelling abroad. When this sum was exhausted they began to cut down their woods. Russia had enormous forests, which in the less fertile regions constituted the most valuable part of the landed property, though formerly the timber was of little avail to the proprietors for want of means of transport. This want is now supplied by the railways; so they have sold the woods to speculators who exported the timber, and the produce has been spent as if it had been an annual rent. There are very few proprietors, who, as is the case in Germany, manage their own estates, nor is there a class of intelligent farmers, most of them leave the land to the administration of stewards, who try to make the most of it for themselves during the period of their contract and are indifferent to improvements. * * *

There are two other factors which account for the prevailing distress—first damages by fire, which according to Mr. Law in 1887 (the latest year for which statistics are available) amounted to £6,500,000 sterling, but which of late years have increased; of these losses as much as seventy-eight per cent. falls on the rural population. This is accounted for by the dryness of the climate in summer, the carelessness of the peasants, and the want of organization for extinguishing fires which are simply regarded as a calamity sent by God. But the dryness itself is the result of the second factor—the ruthless forest destruction which has been going on for a long time and has had a serious effect in reducing the average rainfall. The belts of wood attracted and held the moisture which was slowly distributed for the benefit of agriculture; now in vast regions, as, for instance on the black soil, there is hardly a tree to be seen and the consequence is that the underground rivulets which nourished the soil have disappeared. The forests also broke the force of the fierce east desert winds. Now these winds, piercingly cold in winter and scorchingly hot in summer, burst with full fury on the great plains. In summer, their blasts are capable of withering the corn in a few days and with them come sand storms, which turn fertile land into permanent deserts. The unfortunate experiences of Central Asia, which once was a garden of fertility and now is a desert, peopled by nomads only, are repeating themselves. In the province of Astrachan an area of 800 square miles is covered by drift sand; in that of Stawropol whole villages have disappeared, and in 1885 soldiers had to be summoned to clear the sand from the houses. In the province of Tauris the sand now covers 150,000 dess-jaetines* ; the same disastrous effects took place in the north, where, after the destruction of the forests in the provinces of Samara, Woronesh, and Tchernigow, hundreds of sandhills arose, which gradually covered the fertile land. A further consequence is that the rivers became shallower. In winter there is nothing to hold the snow, which is blown together into large heaps; these with the thaw dissolve into temporary torrents, washing away acres of tillage and carrying off all moisture before it has had time to soak into the soil. The river beds cannot contain all this water and inundations occur; but when it has swept down there is no further supply. The Woronesh on which Peter the Great built his first ships is now a mere rivulet;

* Dess-jatine or dessiatine = 2.702 acres.

the Worskla, which fifteen years ago was a beautiful river, surrounded by woods and pastures has absolutely disappeared; the Oka has become so shallow that barges coming from Nishegorod were stranded upon its sands. At Dorogobush the Dnjepr can be crossed by carriages; on the Dnjepr the navigation had to be stopped, as its depth was reduced to two to three feet; and even on the Volga steam navigation is interrupted in many parts, the river not being able to carry away the sandbanks; it is calculated that the volume of its water has decreased by 24,000,000 cubic metres. It is evident that even the most costly works for opening the channels will be of little avail; the cause lies in the destruction of the forests; the law by which the Government interdicted the ruthless fall of timber has come too late, and replanting is slow work, although it is the only remedy against the evil.

Given these facts, we have certainly not exaggerated in asserting that the famine of 1891 was the result of a general impoverishment of agricultural Russia which in the main is Russia itself.

Forestry in the United States.

Public opinion in the United States has advanced very rapidly during the last few years on the question of forestry. It is being increasingly felt by all thoughtful and public-spirited students of economic questions, that only by some general and far-reaching system, based upon an adequate, scientific and practical grasp of the whole situation in all its aspects, can the United States avert the evils which have overtaken other lands as the result of the disappearance of the forests. The Forestry Associations have done a great deal to educate the public in the principles of forestry, and the disasters on a large scale resulting from deforestation have forced the subject upon the attention of the business community and public men. The most important step as yet taken in the direction of a definite forestry policy on a national scale was accomplished a few months since. The Academy of Sciences of the United States, according to its constitution, may be called upon by the Government for opinions upon scientific subjects. In accordance with this prerogative, the Secretary of the Interior requested the National Academy to furnish an official expression of opinion upon the following points:

1. Is it desirable and practicable to preserve from fire and to maintain permanently as forest lands those portions of the public domain now bearing wood growth for the supply of timber?

2. How far does the influence of forest upon climate, soil and water conditions, make desirable a policy of forest conservation in regions where the public domain is principally situated?

3. What special legislation should be enacted to remedy the evils now existing?

"My predecessors in office for the last twenty years," the secretary wrote, "have vainly called attention to the inadequacy and confusion of existing laws relating to the public timber lands and consequent absence of an intelligent policy

in their administration resulting in such conditions as may, if not speedily stopped, prevent a proper development of a large portion of our country; and because the evil grows more and more as the years go by I am impelled to emphasize the importance of the question by calling upon you for the opinion and advice of that body of scientists which is officially empowered to act in such cases as this."

The reply of Prof. Oliver Wolcott Gibbs, President of the Academy, accepting the commission published a short time since, says that no other economic problem confronting the Government of the United States equals in importance that offered by the present condition and future fate of the forests of Western North America. After giving a summary of facts bearing upon the extent and utility of the forests, the reply goes on to point out that if the report is to be of value as a basis for future legislation it must consider:

1. The question of the ultimate ownership of the forest now belonging to the Government; that is, what portions of the forest on the public domain shall be allowed to pass, either in part or entirely, from Government control into private hands.

2. How shall the Government forests be administered so that the inhabitants of adjacent regions may draw their necessary forest supplies from them without affecting their permanency?

3. What provision is possible and necessary to secure for the Government a continuous, intelligent, and honest management of the forests of the public domain, including those in the reservations already made, or which may be made in the future.

An enquiry of such extended scope will of course require both time and a considerable outlay. The Commission appointed give their services gratuitously, but an appropriation of $25,000 has been asked for to defray the necessary expenses The action of the Government in appointing this Commission marks a decided advance, and the conclusions of a body of such eminent scientific attainments may be expected to lead to important practical results.

In addition to the excellent work being done by the National Division of Forestry under the direction of Mr. B. E. Fernow, who has brought to bear the thorough scientific and practical training received in Germany upon the American forestry problem with the most encouraging results, several individual States have taken the matter up as a function of State administration, and have now regular Forestry Bureaus. Kansas, Minnesota and some other States have Forestry Commissioners as Government officials. The latest to fall into line is Pennsylvania, the appointment of Dr. J. T. Rothrock as Commissioner, being a fitting recognition of the zealous and persistent labors of that gentleman in the cause of forestry in connection with the Pennsylvania Forestry Association. This body has for some years done grand educational work, and to its assiduous efforts to arouse attention to the importance of the subject is largely due the steady growth of public opinion in that State in favor of forestry measures.

Forestry in Ontario.

Owing to the timber policy of Ontario—which in its more important features coincides with that generally adopted throughout Canada—the question of future forestry operations in this Province is rendered comparatively simple. It has been in marked contrast with the course pursued in the United States, where the Government in dealing with large timbered tracts of land have, in selling the timber, disposed of the fee simple of the soil to capitalists and speculators. This renders the difficulty of adopting a policy of forest preservation much greater than if the public had retained the ownership of the land, as large corporate and private interests stand in the way of any change of system and the right to deal with tracts of land originally parted with for comparatively trifling considerations, must now in many cases be bought back at enormous expense. Ontario, keeping in view the fundamental principle of "the land for the settler" has wisely avoided this mistake. In the early days of the Province it was necessary for the settlers to cut down and burn the valuable timber in clearing their farms, but when Government was organized it was soon found advisable to sell the standing timber to lumbermen, retaining the land which it occupied for the settler. This policy served the double purpose of assisting the farmer in his clearing operations, and lightening the burden of taxation, as the proceeds from timber sales formed a large portion of the provincial revenue. Until comparatively recent times, the possibility of a timber famine or the disastrous effects of too thorough clearing on agriculture and climate, was little thought of. When the conditions prevailing at that time are borne in mind it is hardly surprising that our legislators, in their desire to divide the land among the people as it was needed for their homes, overlooked the necessity of providing for the maintenance of a due proportion of woodland in the settled area, either by restrictions upon the cutting of trees or by the reservation of certain tracts to be kept always in wood. That we have suffered to some extent from this cause is evidenced by the drying up during the summer of many streams and springs which formerly maintained an even flow throughout the year, But despite any unfavorable climatic change which may be traceable to the policy of the indiscriminate opening up of lands for settlement, accompanied by over-clearance, it is fortunate for us that we have escaped the more injurious and less excusable mistake made by our neighbors of the United States in alienating the fee simple of large tracts to capitalists at nominal prices. It is moreover worthy of note that the timber and land policy of Ontario has so far been in the direction of the principles of modern scientific forestry. The timber has been treated as a crop, to be harvested when ripe, and not left to over-maturity and decay. Most of the area thus far denuded is good agricultural land and has in the main wisely been devoted to cultivation—although, as already remarked, the individual land-owners, doubtless for want of

proper knowledge, have not in all cases realized the fact that portions of their farms might be better suited for permanent woodland than for tillage, with the result that an insufficient wood crop is left in some of the older settled parts of the Province. That error it is possible to rectify, and the farmers of Ontario are too intelligent not to appreciate the wisdom of so doing.

In the process of converting Ontario from a wilderness to a thriving community, we have now reached a section of heavily wooded country, differing in many respects from the fertile region of Southern Ontario. Running from east to west across the Province is an elevated ridge commonly spoken of as the "height of land" forming the water-shed from which the streams flow north to Hudson's Bay and south to the great lakes and the St. Lawrence. This ridge is the source of our principal streams which provide water powers of great value in many places. Though for the most part rocky, and affording little land suitable for the plough, it is heavily clothed with timber, providing a magnificent reservoir as a feeder to our rivers, and a mine of wealth to the Province. The white pine, the greatest of our timber trees, is abundant throughout this region and for some distance northwards. Beyond the northern limit of the pines a vast forest of valuable spruce extends away to the Arctic circle around the shores of the great inland ocean, Hudson's Bay. This is destined to be in the future the great source of supplies for the manufacture of paper. As yet this territory has been but little explored by the lumbermen, and in fact only imperfect surveys have been made of it. This great area of land, much of it unfitted for general agriculture, is excellently suited for the production of successive growths of timber, and by the application of the simplest principles of forestry will ensure an adequate supply for all possible future requirements and an extensive system of water storage. To accomplish this it is not necessary to keep these northern forests as locked up capital, but to dispose of the timber as it matures and to see that lumbering operations are so conducted as to provide for the natural regeneration of the forest growth. All that is requisite for this purpose is to protect the partially denuded tracts from fire and Nature will do the rest, not perhaps so quickly or with so commercially judicious a selection of varieties as if aided by the skill of the forester, but successfully nevertheless As has been said already, the adoption of the methods of European forestry are unnecessary here owing to the much greater extent of our timber lands, but, though their application under present conditions is out of the question, the practical working of forestry operations in Germany shows the possibilities of the system as a means of revenue, of which we may at some future date be glad to avail ourselves. According to returns given in a recent German work for the years 1892-3, the total area of the German crown forests is 2,444,573 hectares, equivalent to 6,050,445 acres. The gross receipts for timber were 69,781,314 marks, the expenses 36,319,707 marks, and the net revenue 33,461,607 marks, or $8,030,785.68. This

is equivalent to a net revenue of $1.33 per acre. It must be remembered that this large sum was received for the operations of one year and is not much more or much less than the amount contributed to the German revenues every year from this source. Every acre of the German Crown forests is managed in such a way as to produce the greatest quantity of the most valuable timber possible, while our woodlands are the result of nature's unaided efforts to clothe the soil with a timber crop, much of which is of inferior quality and stunted growth while large areas of our crown lands are destitute of trees from want of soil and because of fires. At the same time, owing to the vastness of the territory it will be found advisable for us to keep in timber, it may easily be seen what a large revenue may be received for all time in Ontario under a proper forestry system. While it is true that the prices obtained for the products of the forest in Germany could not be hoped for here, it is equally true that the very expensive management of the German Crown forests would not need to be followed in Ontario. The forestry staff in Germany is very large and possesses a semi-military character, and the expenditure for the year mentioned included, besides the actual cost of harvesting and selling the timber crops and fire protection, the cost of re-planting of considerable new areas, new houses for foresters, and other permanent improvements, as well as the maintenance of the various forest schools. Any system of forestry adopted in Ontario would naturally be much simpler, and because of the vast area we could profitably keep under timber crops, a much smaller net revenue per acre would suffice to largely increase our present revenue from this source.

Under a system of free grants by which lands in some sections of the Province are allotted to settlers, it requires constant care by the Department of Crown Lands to prevent squatters settling on lands unfit for tillage, and there is reason to believe that in some instances the settler, who pays no dues for timber cut in clearing up his farm, is guided in his selection of a location not so much by the richness of the soil, as by the value of the timber standing on it. For this among other reasons it is advisable, in order to provide for future forestry operations, that certain sections not adapted for cultivation should be reserved from settlement. This policy was initiated by the Government in setting aside as a permanent reserve an area comprising 1,733 square miles or 1,109,383 acres under the name of "The Algonquin National Park," to which more extended reference will be made elsewhere. The following communication embodying some recommendations in regard to forest preservation and the extension of the reservation system to other tracts unsuited for settlement was made by the Bureau to the Commissioner of Crown Lands:

TORONTO, Ocober 9th, 1895.

Hon. A. S. HARDY,
Commissioner of Crown Lands,
Toronto.

SIR,—The work of the Bureau of Forestry is likely to be, for some time to come, principally along the line of inducing the farmers in the older settled portion of the Province to attempt the restoration of the equilibrium that should exist between cleared and wooded land. The necessity of having a greater proportion of this territory under forest, than is the case at present, has been made very apparent during the last few years by the rapid and serious lowering of the water in the Great Lakes and the St. Lawrence River, which drain the area in question. From observations made by Kivas Tully, C.E., it is shown that the combined rain and snowfall throughout this part of Ontario has been steadily decreasing for some years Just what effect forests have on the rainfall is still a disputed point among scientific investigators, but there is no doubt whatever of the great influence exercised by forests in regulating the flow of the rain or snow after it has fallen. The wider the extent of the forest floor, with its sponge-like humus, the steadier will be the flow of moisture from the surface of the soil into the streams and lakes, the less will be the danger from floods in spring and from drought in summer.

As the farmers individually own the land throughout the district mentioned, we must look to them for increased forest area. At the same time, as trees must be in considerable masses to be of much benefit in the way of regulating the water supply, we shall be liable to disappointment if we look for rapid or extensive improvement in that direction. The individual farmer cannot afford to devote any considerable part of his farm to trees, if it is good land and could be more profitably devoted to other crops. Even if he did so he would have no assurance that his neighbor would follow his example, and without joint action in this way very little would be accomplished. The most that can be hoped for is that farmers generally may be convinced of the fact that steep hill-sides and poor, stony or sandy soil would yield more revenue if planted to the right kinds of forest trees than under any other crop. The correspondence of the Bureau indicates that this is beginning to be better understood, and, as intimated before, it will be the duty of the Bureau to continue its work in this branch of our national education. An essential part of this education consists in the eradication of the idea that a tree is an enemy to be destroyed wherever found,—an idea that was once so general. In Ontario, at one time completely covered with a dense forest, the great struggle of the pioneer settler was to get rid of the trees that he might raise other crops. So vigorously and so successfully was the work of extermination prosecuted in that part of the Province settled first, that we had passed the danger line in forest denudation before we realized it. The alarm has been sounded, however, by our many dried up springs and streams, by the fast lowering water in the lakes and rivers, and we can now only endeavor to get back to safety,—difficult as that is likely to be where all the land is in the hands of individual and small owners.

In the progress of pioneer life in Ontario there arose a demand for our forest products in Europe, and the burning log heap of the first settler was succeeded by the saw-mill of the lumberman, very much to the advantage of the Province. In the process of settling this Province, the lumberman has been and still is a very important factor. In addition to providing the State with a large revenue, he is of material assistance to the settler in helping him to clear his land.

It may be urged that the lumberman is conducting his operations upon a larger scale than is necessary for the purposes of the settler, but while this may be true the authorities of the Province would have been unwise to limit his operations beyond the restrictions of the market for lumber, which provides a check upon wasteful or too rapid cutting by the lumberman. The forests of Ontario are primeval and for the most part long ago reached maturity. They are not increasing in growth or quantity of timber and cannot do so until the mature trees are cut away, when the smaller ones will have the opportunity to grow that would only come, in the natural order of things, when the old trees had fallen. Withholding large areas of the forest growth from sale longer than the condition of the market warranted would not increase the wealth of the Province, except in the possible increase in the value of forest products, and this would be met by the loss of decadent timber in the meantime, as much of it is already past its prime and must soon decay—in fact is already decaying. It is not to the lumberman we must look as the cause of the too great denudation of the forest growth in the older parts of the Province, but to the settler. The work started by the lumberman who thinned out the forest growth was followed up by the settler and by him was instituted a war of extermination against the trees, with the result that the land was left so bare of trees that we are now confronted with the problem of how best to get back the proper area of wooded land.

Forestry as practised in Europe and India is impracticable in this country unless it be undertaken by the people as a whole, in other words, by the Government. By the word "Forestry" is meant not alone the growing of trees in large masses for climatic and agricultural reasons, but the treatment of these trees in such a way that they will reproduce themselves sooner than if nature were left unaided, and that the revenue from the sale of forest products may be increased. In Germany the public forests, administered by the Government through the operations of their own forest staff, yield a considerable part of the yearly revenue of the State. The product of the forest is taken out and sold by the employees of the Government for the public benefit, while at the same time the general welfare of the country is guarded by keeping the proper proportion of the land perpetually in forest.

So far as that part of Ontario already alluded to is concerned, forestry by the Government is out of the question, for the reason that the land has, practically, all passed out of the ownership of the Crown, and has been given to individual settlers to deal with as they deem wisest, and the Government could not, without unwarranted expense in buying back suitable land from the present owners, attempt any system of re-foresting. All that can now be done is to encourage the planting of trees by the individual owners.

What the settler has done in the older part of the Province in the way of denudation, he may be expected to repeat in the newer part as it is opened up for settlement.

The land is for the people, and it is expedient, under our complex social system, that the people as individuals, or at least some of them, should be given exclusive occupancy of certain portions of it. For this reason there is no other course to pursue but to allot it to individuals as they apply for it, having first, as far as possible, conserved the public interest by selling the most valuable timber on it. No doubt the first duty of the State is to the settler, and so long as we have large areas of fertile land awaiting the farmer, this land must be allotted as has been done and is being done by the government of the Province.

On the other hand the Government is not acting in the best interests of the settler, if it allows him to locate on land quite unfit for agricultural purposes,

and on which he will drag out a miserable existence if he is not wise enough to abandon it when he discovers his mistake. Too often an intending settler is guided in his selection of land by the valuable growth of timber upon it, which he knows can be marketed at once and bring immediate returns in cash. When this timber is gone he finds too late that he has a lot of land that will grow little else but trees, and he either abandons it or hangs on in semi-starvation. In either case he affords an instance of a farmer who has failed in Ontario, and is not a good advertisement for the Province. While thousands of acres of good land are available in Ontario, settlers every year locate on land that has very little to recommend it except its growth of timber, and it would be doing a kindness to these settlers in such case for the Government to say: "This land is not suitable for a farm, and it will be in your interest and the interest of the whole people if it is kept in forest for the common good. There is plenty of good land to be had, select that and leave this poor land for timber."

There yet remain in Ontario, still the property of the Crown, vast areas of wooded land not taken up by the settler. Some of it is good, some of it poor, and it has been or will be cut over by the lumbermen. Government may provide for future forestry operations and future revenue, as well as protect the climate and water supply of the region, by reserving from settlement throughout the unsettled parts of the Province, blocks of land that are found to be not well adapted for agricultural purposes, or that are the sources of streams, or that for climatic or similar reasons should be kept perpetually in forest. These blocks of forest could be worked by the government through its own staff of men, and the fallen, instead of the standing, timber sold to lumbermen. It is well known that denuded forest land, even though it may have been burned over, will re-forest itself in time if left alone. It will re-forest itself in much shorter time under intelligent forestry management, and with the variety of trees the forester finds most profitable to grow. The farmer, speaking generally, cannot be expected to practice scientific forestry even on a small scale. The returns from re-foresting are too remote and the temptation to cut and sell trees before they have reached their most profitable age is too great to be resisted in times of financial straits. The government only can do so successfully, and in a great part of the Province the opportunity is afforded the Government to prevent the unwise wholesale deforesting that has already adversely affected this part of the Province and to preserve for all time a steady source of revenue.

As suitable locations for reserves of this sort I could refer you to sample townships among those now open for settlement. The soil in these townships is broken and a great part of the territory thin and poor. One of them in particular is full of small lakes and is hilly and rocky. All were formerly under license and have been cut over for pine. As a result of this cutting and the consequent breaks in the forest cover, a vigorous growth of young pine is springing up throughout the woods, and, if properly protected, within a few years (much fewer than is generally supposed) another crop of pine could be harvested from this land, swelling the revenues of the Province and at the same time increasing the value of the good land in the vicinity by keeping these large blocks in forest. I am informed that as yet very few patents have been issued for land in these townships. Would it not be possible or advisable to withdraw a considerable part of these townships from settlement and make of the land a permanent Crown forest for climatic and revenue purposes?

To do this of course entails the employment of a small staff of men to protect the reserves from fires and perhaps from poachers, but I believe the expense would be met at once by the sale of fallen timber and other trees found advisable to remove, while the men employed could be largely obtained from the settlers in

the vicinity, very few men requiring to be permanently employed. A very important move was made in this direction when the Government set aside Algonquin Park as a forest reserve not open to settlement. Existing timber licenses in the park, and the sale of new ones rendered necessary by the decadence of much of the pine timber, made regular forestry operations conducted by the Government through its own staff for the present out of the question there, except as an experiment, and the only practical way of preserving the public revenue derived from the timber has been followed.

A large part of the provincial wood lands is now under license to lumbermen, and it will doubtless be found advisable to harvest the present crop of mature and decadent timber in the same way. Consequently it may be some time before forestry on any extensive scale can be practised by the Government. As the licenses are allowed to expire by the lumbermen after they have removed the heavy timber, the reservations could come into effect, and I assume that in the case of each reservation there would be no license to stand in the way or no other vested interest to prevent an operation so evidently in the interest of the whole people. Some of the nations of the Old World have had to buy back the land from the individual owners before they could undertake the work of re-forestation rendered necessary by the disastrous floods and arid soils in large areas of country. In New York State the attempt to save the Adirondack forest, the great water reservoir of the State, from destruction, has been found almost impossible because of the claims of lumbermen and others to the ownership of the land.

In Ontario, however, the practise of selling the lumbermen the timber only and not the land as well, has left us in position to put a proper system of forestry in operation, in so far as that part of the Province still unsettled is concerned, with no initial expense or no raid on the treasury. It is true the cost of management, or rather the cost of operating, would absorb a greater proportion of the proceeds of the sale of timber here than would be the case in Europe, where the forest products are more valuable, but it must be remembered that timber is becoming more valuable here, new varieties of our native woods are coming into use, and by the time Government could have its forestry staff organized and reserves ready for operation there would be no difficulty in having the balance on the right side of the ledger.

I know there are always opposed to operations of this kind those who contend that governments cannot conduct business operations as economically as individuals or corporations. While instances are not wanting to show the force of this position it does not follow that it is an insuperable objection in Ontario. The State forests in Germany are economically administered, and I can see no reason why the Province of Ontario cannot realize as much revenue from timber cut and sold to lumbermen as by the sale of that timber standing. And besides this, admitting the necessity of scientific forestry on a large scale, it can be done in no other way than by that indicated. The Government must eventually undertake it if it is to be undertaken at all, and provision may be made for future revenue from this source only by reserving from settlement sections of land that will grow trees more profitably than other crops, and that would be well to keep in forest for the general benefit of the community.

I am, etc.,
Your obedient servent,

THOS. SOUTHWORTH,
Clerk of Forestry.

Acting on the suggestion of the Commissioner of Crown Lands a number of the Crown timber agents were communicated with and requested to report, either from their personal knowledge or from information furnished by the timber rangers, as to the existance in their districts of any considerable areas of young second growth white pine. At the time of writing the rangers had completed their trips, and as they had not been previously requested to procure information on this point, the reports received were of course incomplete, referring only to growths of young pine which the agents or the rangers had casually observed in passing, without making any attempt to estimate their extent. While these reports are admittedly unspecific and based upon incidental observation merely, instead of such a special exploration and survey as would be necessary to determine the precise area of second growth white pine, sufficient data have been obtained to warrant the conclusion that large tracts of the Crown domain from which the original growth of white pine has been cut are now covered with young seedlings of the same species. These, if protected from fire and the axe will, in from twenty to fifty years, yield a crop of timber nearly, if not quite, as valuable as that which has already been harvested

The reports seem to vary according to the thoroughness of the knowledge of their respective districts, possessed by the agents. They all report, more or less young pine growing, except Mr. Munro, of Port Arthur, who remarks, "the large areas that have been burnt over in this district invariably grow up with either poplar or jack pine on the high lands, in the lower grounds with witch hazel, alders, willows, in the drier parts with spruce, tamarack and birch."

Mr. Johnson, of Arnprior, sends a very comprehensive report from which the following is extracted: The west half of the Township of Brough, north half of Matawatchan, north half of Griffith, south-east quarter of Lyndoch, north half of Radcliffe, north-west half of James, west three-quarters of Robinson, have very few settlers, and have been burned over for a number of years past and have very few green pine trees standing, as the country has been cut over many times. There is a growth of young pine, such as I think you mean as white pine seedlings, started all through the above parts of townships, and particularly so through the older burned sections. From the foot of Victoria Lake to the head of the Big Opeongo Lake is all a green country, and has no settlers, I mean north of the Opeongo Creek. The west half of North Algona, nearly all of the township of Richards, a good part of Marter, the north half of Guthrie and north-east part of Nevin, all that section of country along the White Partridge Creek to the Petewawa River and up to the head of Trout Lake, also all south of Trout Lake to Lake La Vieille has been burned over for some years. There are no settlers in this section of country with the exception of four or five. There is a growth of young pine, both white and red, springing up through most of the above

country. In part of the townships of Wicklow, Raglan and McClure, which have been cut and burned over several times, I have noticed seedling pines growing."

Mr. Russell, of Pembroke, sends the report of timber rangers McCagherty and Kennedy who, at his request, reported on their districts. Mr. McCagherty states that as he has not been over the country since getting the request to report on it, he can only speak from memory and not minutely. He has noticed extensive growths of young white pine, ranging from one to seven inches in diameter throughout the west-half of the township of Fraser in the County of Peterboro, and the south-west part of Alice in the same county. There is also a growth of young pine in the township of Stratton along the Pettawawa River. All these lands have been cut and burned over.

Ranger John E. Kennedy, of Pembroke, writes: "I know there are large areas of such young pine growing in several of the townships in my district of ranging, but how many square miles of such pine I do not know. What the nature of the soil is in such areas, whether good farming land or not, I cannot say. However, I know from passing through the following townships that a large quantity of young pine, too small for merchantable use at present, is growing: That portion of the township of Fields under license to J. R. Booth, and operated over, lying on the east side of the Sturgeon River, between the mouth of the Tomiko River and Pike, or the north boundary of the same (township) extending north through the township of Bastedo or Berth No. 3. Judging from the appearance of the surface in most of the places, would say the land is worthless for farming purposes. A small portion of this same township between Lake Clear and the west side of the Sturgeon River is well covered with such pine and I know most of the land is not fit for cultivation. I notice also that a portion of the north-west part of the township of Hugel, now under license to W. & S. Cockburn, has quite a bunch of such pine growing, and also a large portion of the township of Appleby on the Veuve River, once operated over by Davidson & Hay. There are large tracts of such pine growing on the head waters of the Jocko Creek, on Bronson & Weston's limits, and also between the head waters of the Tomiko River and Otter Creek. The township of Notman, on the Tomiko, is nearly all covered with young pine, and the land is nothing but stone and gravel. In many places through the old brules of thirty years ago there are seedling pines growing, but where the fire passes and kills this young pine before it is old enough to bear seed it never grows again."

In the Peterboro District Mr. McWillams reports a good growth of young white pine on lands not suitable for general agriculture in the following townships:

Galway, all of the 6th and 7th concessions, east from lot 10; Cavendish, 1st to 8th concessions, west from lot 15; Harvey, 1st concession, north from lot 15; North Burleigh, 1st to 5th concessions, except small lot under license; South

Burleigh, all east of Eel's Creek; Methuen, all unsold lots in concessions 8, 9, 10, 11, 12, except a few lots in Rathbun's and in Gilmour's limits, and concessions 1, 2, 3, 4, 5, 6, 7 from lot 6 to lot 20. These lands have all been under license and have been cut and burned over. The different lots are contiguous and what settlement there is likely to be is pretty well completed.

Mr. Halladay reports as follows:

Abinger, on all Crown lands in this township considerable young white pine is growing.

Clarendon, lots 6 to 8, inclusive, in concessions 10, 11, 12, 13, 14, also from lot 1 to lot 20, inclusive, in concessions 1 and 2, have crops of young white pine and if protected would yield valuable crops of timber in thirty years.

Barrie, all the Crown Lands north of the 11th concession have considerable, young pine scattered through them.

Palmerston has a good deal of young pine scattered through the Crown Lands, as has also the township of Olden, but in both these townships settlers are so generally scattered through them that Mr. Halladay is of the opinion that it would be very difficult to protect the young trees from fire. Concerning the general question of the reproduction of white pine after the removal of the original growth Mr. Halladay writes:

"In my travels, experience and close observation for the past twenty years in connection with the burned lands of the Province I find that after a pine forest has been destroyed by fire, there springs up a growth of pine timber, on all lands formerly timbered with pine, which, in many sections, makes a rapid growth and would in fifty years produce merchantable timber, but unfortunately other fires follow in a few years and destroy the young forests. After a second fire the young pine becomes more sparse and other timber, such as white birch, poplar, etc., takes possession of the soil. A third fire exhausts all the pine seed in the ground and the pine timber becomes extinct. Consequently the great problem to solve by the people of Ontario is how to protect our forests from fire. I would just intimate that if the problem can be fully and practically solved, I have no fear as to the future timber supply of the Province. For instance take the parts of the Province that are drained by the rivers Mississippi, Madawaska, Bonnechere and Petewawa and many sections in the Georgian Bay districts, we find extensive areas of young pine timber which will, as stated, produce merchantable timber in fifty years if not destroyed. You can realize the importance of this question to the people of the Province as, when the present forest is cut, the old or burned territory would be producing timber. There might be something done in connection with this matter, by enlisting the sympathy and assistance of the various township councils, and impressing upon them the importance to their respective localities of protecting the young pine forests from destruction. I would also suggest that in commencing tree-planting or planting pine seed it

is of the utmost importance to make an intelligent and practical start. From observation I have come to the conclusion that the proper place to experiment is in one large area of hardwood lands, such as exist in Algonquin Park and the adjoining townships. I have noticed in my travels, and perhaps you have also, that you rarely find a locality timbered with hardwood that has been burned. Consequently I consider that by utilizing these hardwood sections there is every probability of protecting the young trees from destruction by fire, which is the most important factor in tree culture in this Province. The hardwood lands produce the best quality of timber, consequently it follows that cultivating timber in those sections will produce better results. There might be some difficulty owing to the timber now on the ground shading the young trees to too great an extent, but I consider that by removing the small timber and leaving the larger trees, the young trees would have sufficient sunlight to develop, and the larger deciduous trees shedding their foliage annually would prevent the spread of forest fires."

Mr. D. J. Macdonald, of the Parry Sound District, reports that he does not know of any area of more than two or three acres in extent where second growth white pine exists. Prior to the heavy forest fires which overran the country in 1881 and 1882, however, there were numerous clumps of second growth pine springing up in and around old and abandoned clearings in the townships of Morrison, Muskoka, Oakley, Draper and Macaulay, which grew from the seeds of the old pines in the adjoining forest. The fires destroyed nearly all of these small groves together with the forest pines. The second growth after the country has been swept by fire is invariably aspen, poplar, white birch and fire cherry. In the northern and eastern parts of Algoma Mr. Macdonald has found jack pine (*Pinus Banksiana*) mixed with the poplar and other second growth, but has never found young pine growing after the original pine woods have been burned over so as to destroy the old trees. Where, however, the pine has been cut and fire has not succeeded, the young pines spring up and thrive until destroyed by the flames. In localities close to lakes, swamps or marshes where a few of the original pines escape destruction by fires which sweep the surrounding country, the young seedlings may be seen springing up thick and healthy, even after a second fire. In Harrison township, near the Naiscootyong river, is a strip of second growth of poplar and white birch, covering a tract which must at some time have been fire swept. A portion of this was again destroyed in 1882, and the new growth is white pine, the seeds of which probably came from pines growing among the poplars and birches.

In Matchedash township there is a strip of second growth pine near the Severn river which Mr. Macdonald suggests would form the nucleus of a second growth pinery if the underbrush were cut, the pines thinned, and fire kept out.

On the road between Midland and Penetanguishene about 100 acres of poor, sandy land was well timbered with second growth pine, which had attained an average growth of ten inches in diameter at the stump cut. But about two years ago the trees were sold by the owner for manufacturing purposes and cut down.

A general impression exists, endorsed to some extent by scientific authority, that something like a natural law of rotation of crops prevails, in accordance with which pine, when removed, is invariably succeeded by deciduous trees. The information comprised in the foregoing reports renders it abundantly evident that this is a popular error, due to insufficient consideration of all the conditions in connection with the reproduction of forest vegetation. The fact that the clearance of pine is generally followed by a growth of other varieties is due entirely to the agency of fires and the destruction of pine seeds and the remaining parent trees. In a fire-swept region, where the ravage has been complete or nearly so, the character of the new vegetation depends upon the seeds which are first deposited upon the soil, and hence the varieties having downy or light seed-vessels, which may be borne long distances by the wind, are as a rule those which form the bulk of the second growth. Where pine has been removed, and no fire has taken place, it is invariably succeeded by its own kind, and not until the land has been twice burned over is it so exterminated as to give place to the second growth of inferior varieties. That the contrary opinion has so long prevailed is altogether due to the circumstance that lumbering operations and the influx of settlement upon pine-covered land are so generally followed by repeated fires that second growth of the less valuable deciduous trees is the usual rule.

Practically all that needs to be done in order to maintain our timber supply in perpetuity and secure all the other advantages accruing from the presence of large forest tracts, is to retain in the possession of the Crown all such timbered land as is not well adapted for agriculture, and to protect it adequately from fire. Were this done the apprehension of the exhaustion of our timber resources would no longer be even a remote possibility. Large as the demands upon our forests are, their reproductive capacity, provided the ravages of fire can be suppressed, is many times greater.

Annual Growth of Timber.

The United States Department of Agriculture, through its forestry branch, has for some years been preparing returns of "timber physics," and among other things, something like close figures have been obtained of the actual annual growth of timber on an acre of forest land under ordinary forest conditions. These figures were derived from a very extensive series of actual measurements over a term of years on different lots in Maine and New Hampshire forests. The conclusions

reached by the United States authorities differ materially from the estimate given by Brown and Nisbet, eminent English authorities in the matter of annual growth. While "Brown's Forester" estimates the annual growth on an acre of Scots pines at 100 to 120 cubic feet, the United States Division of Forestry places the annual growth in a New Hampshire spruce forest at only fifty-nine and a half cubic feet. In comparing these two estimates it must be borne in mind that Brown's estimate is for a Scotch plantation in which the trees have been carefully tended, and in which, because of this, the growth would be greatly in excess of that in an ordinary American forest, where overcrowding and other causes retard the growth. For the purpose of estimating the annual growth in Ontario, where the conditions are much the same as in the States mentioned, we will take the United States figures, fifty-nine and a half cubic feet, or for facility in computing, sixty cubic feet per acre as the average annual growth in the Crown forests under ordinary conditions.

The area of the timber-bearing lands still belonging to the Crown in Ontario can only be approximately estimated. According to a return to the House in 1893, there are about 21,000 square miles of pine lands under license, and 24,410 square miles of pine lands still unsold. These areas are exclusive of a territory of 89,000 square miles that is more or less timbered, but as it is not supposed to have large quantities of pine upon it, no account has been taken of it by the Department of Crown Lands. It is known, however, that much of it is well timbered, and where pine is not present there are large quantities of spruce and other woods. Assuming this territory to be fairly covered with timber, we will take half of it for the purpose of this calculation, which will give the total forest area of the Crown in Ontario as 89,910 square miless. As lumbering operations are being carried on to a greater or less extent in parts of the licensed area, we will allow for this and take 80,000 square miles as the timber area of the Province, certainly a very low estimate, having regard to not white pine alone, but to other timber as well. Eighty thousand square miles is equivalent to 51,200,000 acres. Estimating the annual addition of timber over this area at sixty cubic feet per acre, we have a total addition to the amount of timber each year amounting to 3,072,000,000 cubic feet. This estimate is of timber exclusive of tops and branches.

According to the report of the Commissioner of Crown Lands for 1894 the amount of timber cut on the Crown Lands, of all kinds in lumbering operations amounted to 60,695,250 cubic feet for that year. Deducting this amount from the annual growth, there would be 3,011,304,750 cubic feet in excess of the cut of timber each year, as may be more clearly shown by the following table:

ANNUAL CUT OF TIMBER IN LUMBERING OPERATIONS AS PER CROWN LANDS REPORT, 1894.

Saw logs, boom timber, dimension stuff	53,200,555	cubic feet.
Square timber, pine and other than pine	1,185,529	"
Cordwood	1,879,936	"
Pulp wood	1,381,504	"
Posts and shingle bolts (estimated)	767,872	"
Piles and head blocks	279,854	"
Railway ties and telegraph poles (estimated)	2,000,000	"
Total	60,695,258	"

ANNUAL GROWTH ON CROWN LANDS.

Estimated annual growth per acre of ordinary forest land adopted by the U. S. Forestry Bureau, 60 cubic feet; total area of Ontario Crown Lands licensed and otherwise, pine-bearing and other forest land, say 80,000 square miles; 80,000 square miles, or 51,200,000 acres, will produce per year according to this estimate, 3,011,304,750 cubic feet in excess of the annual cut of timber, or

Annual growth	3,072,000,000	cubic feet.
Annual cut	60,695,250	"
Annual growth in excess of annual cut	3,011,304,750	"

This is assuming that the lumberman's axe is the only cause of the removal of timber. Unfortunately, however, this is not the case. The amount of timber destroyed by fire from one year to another is an unknown quantity. That the amount far exceeds what falls before the axe of the lumberman is probable, and in any scheme of forest perpetuation protection from fire must occupy the most prominent place. Notwithstanding the efforts of the Government fire rangers for the past few years the loss to the Province through forest fires has been considerable, though vastly less than would have been the case had the protective measures employed not been used. If fires could be prevented or even very much lessened the present rate of cutting on the Crown lands could be continued indefinitely, for the annual increment of growth far exceeds the annual cut. These figures are of course theoretical for the reason that in much of the primeval forest the decay of over ripe trees may be said to equal the growth of the others. This is not the case generally though and more particularly where

through lumbering operations the larger timber has been taken out, enabling the smaller trees to grow so much faster. Besides, the enormous difference of three billions of cubic feet will allow for considerable latitude in this respect.

Fire Protection.

In considering plans for re-forestation a point referred to in the extract from Mr. Halladay's report above quoted as to the advisability of planting or sowing white pine in land where the existing cover is hardwood ought not to be lost sight of, a mixed forest being preferable to one of purely coniferous trees on account of the comparatively slight danger of fire. The axe of the forester should be employed to remove unproductive timber so as to secure sufficient space and freedom for growth for the more desirable kinds and so increase the value of the yield. But this is a much less important consideration than the lessening of the destruction by fire, which can be accomplished at comparatively small expense as has been already shown by the operations of the Ontario fire-ranging system. Dr. Rothrock, Forestry Commissioner of Pennsylvania, estimates the annual loss direct to that State from forest fires at one million dollars, and contends that if to this were added the future value of the young timber and seedlings destroyed by the flames, it would amount to a very much larger sum. According to his view the existing fire laws are amply sufficient to prevent these continually recurring conflagrations, were they efficiently enforced, but they have so far proven a failure for want of adequate machinery for carrying them into effect. Prior to 1886 similar conditions prevailed in Ontario. Our provincial fire act was framed on the same lines as the legislation in leading American states and had been upon the statute book for years, but it had not been found to be any material check upon devastating bush fires owing to the lack of proper means for the enforcement of its provisions. In 1886 Mr. Aubrey White, now Assistant Commissioner of Crown Lands, addressed a report to the Commissioner, strongly advocating the adoption of a system of fire-ranging. Acting upon this recommendation the present system, substantially embodying the plan submitted by Mr. White was adopted with highly satisfactory results. The following are the leading provisions:—A number of men are placed upon the Crown Lands during the dangerous season, which lasts from May until about the close of September in localities specially exposed to fire by reason of settlement, railway constructing, lumbering or any other cause. Where the land is under license, the co-operation of the limit-holders* is requisite, it being optional with them to take advantage of the system. The number of men necessary to give adequate protection is decided by the owners of the limit, as being familiar with the country and the direction from which danger is likely to come. The selection of the men to be employed on the staff is also in their hands, the Depart-

* A limit is the area over which a lumberman holds a license to cut timber.

ment reserving the right to reject or remove any man whom they consider unfit for the position. The fire-rangers are constituted officers for the enforcement of the Fire Act by section 14 and act under the instructions of the Department. They make the public acquainted with its provisions by putting up posters in conspicuous places and circulating copies of it among settlers and others. In case fires break out they are authorized to engage assistance for suppressing them, and should they become extensive it is their duty to notify both the limit-holder and the Department. Half of the expense incurred in maintaining the staff and suppressing fires is borne by the Crown Lands Department and the remainder by the owners of the limits. The pay of the fire rangers is fixed at $2 per day without board or other extras. They report at the end of the season as to the duties performed and number and extent of the fires which may have occurred.

The good effects of the system were specially manifested last year. Though the summer of 1895 was the dryest for many years, the temperature being unusually high in addition to the light rainfall, the destruction of timber by fire was remarkably small. In consequence of the danger the staff was strengthened in specially exposed places and closer vigilance maintained.

Reports from forty-nine timber limits where the system was in operation in 1895 show that as closely as can be estimated, the quantity of timber damaged by fire amounted to 57,556,000 feet, valued at $41,600. The number of fires specifically reported was ninety-three, in addition to which there were many others, principally small ones not enumerated. Any one at all familiar with backwoods life and conversant with the conditions which prevailed prior to the introduction of the system can easily realize the enormous saving which has been affected by providing this safeguard against forest devastation. When the dry character of the season and the number of fires actually started but suppressed before they had made headway is taken into account it can readily be seen that but for the presence of the fire-rangers at the most exposed points, areas amounting to hundreds of square miles would probably have been ravaged and the losses to timber licensees and the public would have been immense. This saving has been effected by the employment of 114 men for a few months in the year, at a total cost of $26,253, shared between the public treasury and limit-owners.

So far the fire-ranging service has been practically confined to the portion of the Crown domain under license, although occasionally, when special exposure to the danger of fire imperatively demanded it, some parts of the unlicensed territory immediately adjoining timber limits have been included in the operations of the service. In view of the magnitude of the interests involved in the preservation of our forests and the fact that the greatest peril which threatens their destruction is fire, the system which, after nine years' trial, has proved so effective

and satisfactory, should be extended, if not over the entire area of forest still held by the Crown, at least to considerable tracts of the more valuable and exposed portions. In place of its adoption for the districts under license being dependent upon the voluntary co-operation of the limit-owners it might well be made compulsory throughout all licensed territory. Few licensees, if any, would object to the comparatively slight tax involved for the protection afforded their property, and such objections, if offered, ought not to be allowed to outweigh the paramount interests of the public or jeopardize the property of their more prudent and reasonably-minded neighbors. Such a general extension of the fire-ranging system, combined with the withdrawal from settlement as timber reserves of the wooded tracts marked out by situation and character of soil as naturally adapted for permanent forests, will complete the policy already initiated by the Government and prove amply sufficient to avert the calamities apprehended from forest destruction.

The main objection likely to be urged against such a course is that of the expense entailed. In view of the contrast between the enormous destruction of timber, formerly a matter of yearly occurrence, and comparative immunity from serious fires enjoyed in the districts where the fire-ranging system is in operation, the cost, were it far greater than the rate of outlay so far required for the efficient guarding of the limits, would be a very small percentage of the saving effected. It must be always borne in mind that the immediate loss in merchantable timber caused by a forest fire is usually far exceeded by the damage to the young timber and seedlings and the injury to the productive capacity of the forest, especially in cases where a thin layer of soil, the accumulation of centuries, covering a bed of rock has been consumed. To calculate merely the selling value of the mature timber destroyed or injured gives an exceedingly inadequate idea of the destructive effects of fires. Upon this point Dr. Rothrock, the Pennsylvanian Forestry Commissioner, says in the report to which reference has previously been made:

The most obvious consequences of forest fires, serious as these may be, are by no means of the greatest importance. Loss of logs, of bark, of standing timber, young and old, of fences, and occasionally of buildings, is, as stated elsewhere, not less than a million dollars annually to this Commonwealth. This might well enough be termed a direct loss to the State. The indirect or consequential damage to the State is many times greater. In fact it is so great that it appears incredible until after a careful study of the whole subject. For example, it is fairly within bounds to assert that if all the unproductive lands now vacant and uncared for, which exists within the limits of the State, were protected from forest fires for say forty years, the timber then growing would be worth not less than $1,200,000,000. It is quite certain that if this growth were destroyed by fire when but a year old, the loss to the Commonwealth directly would be absolutely unimportant. The same might be said if we were to see it destroyed at two, three, four or even five years of age. But when we remember that in burning these seedlings which are but a year old, we destroy

a crop which in point of time is one-fortieth of its way on to a money value of $1,200,000,000, the damages are consequential or indirect in character, and if expressed in figures must equal not less than thirty millions of dollars as the loss to the Commonwealth.

Pennsylvania is an old and thickly-populated community, having no forests at all comparable in extent or value with those which clothe the great northern regions of Ontario. These conclusions, therefore, apply with tenfold force to this Province and afford a complete answer to any possible objections which might be advanced on the score of expense, against such an extension of the fire-ranging system as would afford reasonable protection to all portions of the Crown domain occupied by valuable timber in any stage of growth, whether under license or otherwise.

THE FORESTRY PROBLEM IN OLDER ONTARIO.

It is practicable, as already pointed out, to preserve a due proportion of forest in that part of our vast territory still unsettled and that still remains the property of the whole people. There is, however, a large area forming the water shed of Lakes Huron, Erie, Ontario and the St. Lawrence River, that is already alienated from the Crown and in the hands of individual owners and which has begun to feel the evil effects of a too liberal use of the woodman's axe. Throughout this cultivated area springs are drying up, streams that once furnished moderate water power all the year round are now torrents in the spring and dried up trenches in summer, unobstructed winds sweep over the land, hastening evaporation and intensifying the draughts caused by the lessening rainfall, extremes of heat and cold are greater and a general deterioration of the climate in Southern Ontario is apparent.

That the rapid disappearance of our forests is largely the cause of this state of affairs is undoubtedly the case, and in order to bring back the former and better conditions the proper proportion of woodland to cleared area must be restored. In other words we must resort to replanting.

For several years the necessity of checking forest destruction in the settled part of Ontario has been apparent to thoughtful students of our agricultural welfare, but so far, comparatively little has been accomplished. It is difficult, in matters of this kind, to move very much in advance of public opinion, and, until recently, the disasters following in the wake of the almost complete disappearance of standing timber has not been noticed or felt by the great mass of the people. If they noticed the effect, and they could not very well avoid doing so, it is only within the past few years that the cause has been apparent.

Through the agency of the newspaper press, students of forestry and agricultural experts—notably Sir Henry Joly in Quebec and the late Mr. R. W. Phipps in Ontario—the public has arrived at a much juster conception of the function of trees in our national welfare.

We have no wealthy, extensive land-holding class in Ontario, most of the settled land being held in small lots. While this is of course preferable to a landlord system, it renders the possibility of large areas of land being kept in timber out of the question, without the aid of direct governmental interference. That such interference is warranted, on account of the general good to the whole community, which demands that poor and rocky lands along the borders and at

the head waters of the streams and on steep hillsides should be kept wooded, is now pretty generally conceded. Just what form this interference is to take is the problem that confronts us.

The stringent forest laws of France which prevent a land owner from cutting off his woodland without the consent of the State authorities, are out of the question. In the first place such arbitrary interference with what each man has always looked upon as his own to deal with as seemed to him best, would be repugnant to the ideas of liberty obtaining in this country, and, secondly the appalling evils following forest destruction in some parts of France, which were the cause of the legislation referred to, have not been felt in Ontario as yet, except in a limited degree. It is evident that governmental efforts for re-foresting in Ontario must be in the direction of what might be called "assistance" rather than "interference." This may be accomplished in either or both of two ways: financial assistance in tree-planting and education in the matter of rearing woodland crops for profit.

What has been Done.

What little has yet been done has been in this direction, the only effort in the way of financial aid having been embodied in an Act of the Legislature in 1883, called "The Ontario Tree Planting Act." This was intended to encourage the planting of shade trees along highways and farm boundaries, and obviously could have but little effect on the main object of forestry, the raising of a timber crop and the conservation of the water supply.

The Working of the Act.

Acting on instructions received from the Commissioner of Crown Lands, the Bureau of Forestry entered upon an investigation as to the extent and results of tree-planting in Ontario generally, with special reference to the working of the Act. The doubts entertained as to the utility of its leading provisions were fully justified by the results of the investigation which, so far as they related to the Tree Planting Act, were embodied in the following communication addressed to the Minister of Agriculture:

Bureau of Forestry,
December 20th, 1895.

Hon. John Dryden, Minister of Agriculture, Toronto.

Sir,—In the year 1883, pursuant to the recommendation of a Committee appointed to attend the American Forestry Congress held at Cincinnati during

the previous year, "The Ontario Tree Planting Act, 1883," was passed by the Provincial Legislature. The object of this measure was to encourage the planting and care of trees for purposes of shade and ornament along the public highways, the boundary lines of farms and other suitable places. In addition to some general provisions respecting tree-planting and preservation, the Act provides that any person owning land adjacent to any highway, street, lane, alley, place or square may plant trees on the portion contiguous to his land, provided they do not become a nuisance or obstruct travel, and also that any owner of a farm or lot may, with the consent of the owner of the adjoining property, plant trees on the boundary line. Trees set out on the highway are declared to be the property of the owner of the adjoining lands, and those planted on the boundaries of farms or lots the common property of the owners.

The council of any municipality is authorized to pass a by-law for paying out of the municipal funds a bonus not exceeding twenty-five cents for each tree planted under the provisions of the Act on any highway or boundary line of farms or within six feet of such boundary.

The varieties of trees which may be used include Ash, Basswood, Beech, Birch, Butternut, Cedar, Cherry, Chestnut, Elm, Hickory, Maple, Oak, Pine, Sassafras, Spruce, Walnut and Whitewood. An Inspector of Trees must be appointed by the municipality to secure their due protection from injury or removal and to see that the conditions imposed in connection with the payment of a bonus are complied with.

The Act appropriated $50,000, to be known as "The Ontario Tree-Planting Fund" for the payment of the share of the bonus payable out of the Provincial Treasury.

In accordance with instructions received I made an investigation into the working of the Act. At the time this enquiry was begun last summer the Act had been in full operation for nine years, from 1886 to 1894 inclusive; though passed in 1883, three years were required to elapse before any payment of bonuses could be made. The total amount paid during that time by the Province in bonuses was $4,808.78, being less than one-tenth of the fund of $50,000 appropriated for the purpose. It will be seen from this that comparatively few of the municipalities of the Province have availed themselves of the provisions of the Act. The amount paid by the Province in bonuses each year is as follows:

1886	$452 38
1887	834 84
1888	574 41
1889	364 97
1890	535 93
1891	503 84
1892	773 70
1893	486 11
1894	282 60
Total	$4,808 78

The marked decrease during the last two years in the amount called for, indicates that interest in the subject, and a disposition on the part of municipalities to avail themselves of the inducements offered by the Act to tree-growers, are declining. The limited scope of its operations so far, may be judged by the fact that only forty-nine municipalities all told had, up to the end of 1894, obtained grants from the tree-planting fund. Of these, forty-two townships received in the aggregate $4,338, the balance, $469.85, being distributed among five towns and two villages.

In June last circulars were sent from the Bureau of Forestry to the clerks of 433 townships and 228 other municipalities to elicit general information in regard to tree planting. In the circulars forwarded to the municipalities which appeared from the Public Accounts to have drawn bonuses under the Act, the clerks were asked for information as to the working of the measure, the number and condition of the trees planted, and as to whether the people were satisfied with the system and likely to avail themselves of it to any further extent.

The returns received are not sufficiently definite to enable me to give anything more than a loose approximation of the number of trees planted as a direct result of the bonus provisions of the Act. A large proportion made no reply to the question and others stated that they had no data for an accurate statement and merely gave a rough estimate. Replies received from twenty-eight townships, giving either the actual figures or an approximate number, give an aggregate of 35,537, and answers from four of the other municipalities show 1,495 trees set out, making a total of 36,032 from those municipalities which have furnished information of a sufficiently definite character to be available. In addition to the municipalities which were known to have adopted the Act, and consequently requested to furnish this information, answers received to the general circular sent out to other municipalities show that by-laws in accordance with its provisions have also been adopted by seventeen townships, four cities,

nine towns and eight villages from which no claims for bonuses had been forwarded, although in many cases a good deal of planting had been done. A fair estimate of the total number of trees planted under, or as a result of the Act, would be about 75,000, a somewhat meagre result for nine years when we remember that in Kansas, for instance, about a million and a half of trees are planted yearly.

To the question, "How are the people satisfied with the system, and is your municipality likely to avail themselves of it to any further extent?" answers were received from thirty-eight townships out of forty-two which had received bonuses. Of these, eleven stated that the by-law adopting the Act had been repealed, three intimated that the Act was unpopular and its operations unsatisfactory, ten were to the effect that the people were indifferent and not likely to avail themselves further of the measure, nine expressed themselves satisfied with the Act and anticipated further claims under it, and five were dubious and indefinite. Answers received from two towns and one village expressed satisfaction with the Act, and from one village stated that the people were not likely to take further advantage of it.

Among the numerous reasons assigned why the Act is not more generally adopted and why in many cases it has failed to work satisfactorily when put in operation, are the following:

1st. The delay of three years which must elapse between the planting of the trees and the receipt of the Government bonus.

2nd. Objections on the part of those who do not propose to take advantage of the Act, to the outlay of public money on what they regard as a private benefit.

3rd. The discouragements sustained by many who have planted trees on the highway from their destruction by cattle and the want of adequate protection.

4th. The desire of many landowners to retain full control of the trees planted by them, with power to cut them down should they see fit, which they would lose by accepting the bonus.

5th. The preference among many who set out trees, for location, modes of planting, etc., not in accordance with the Act.

6th. Lack of information in many cases as to the details or even the existence of the Act.

7th. The extent of roadside planting carried on irrespective of legislation, which in many localities renders the Act superfluous.

8th. Objections to roadside trees, more especially in localities where the roads are narrow and the soil heavy, on the ground that their shade keeps the roads wet and muddy and injures the crops.

I do not present these reasons as being conclusive arguments against either the principle or the working of the Act, but simply as indicative of public opinion in regard to a measure which, being permissive in its character, is only valuable so far as it can obtain an active public support. It is quite evident that the Ontario Tree Planting Act of 1883 has fallen far short of realizing the expectations entertained at its adoption. The failure to commend itself to the public is demonstrated by the fact that although during the period of its operation there has been an extended and increasing interest in tree planting, only a very small proportion of the municipalities have thought it worth while to pass the by-laws necessary to bring it into force in their respective localities, and that, even in the majority of cases in which this has been done, such legislation has either been subsequently repealed or allowed to become a dead letter.

In view of these conditions I therefore venture to recommend that the sections of the Ontario Tree Planting Act of 1883, which provide for the payment from the Provincial treasury of one-half the amount of bonus paid by municipalities for tree planting be repealed, due regard being had to the rights of those whose claims on account of trees already planted under their provisions may mature within the next three years.

I have the honor to be, sir,

Your obedient servant,

THOMAS SOUTHWORTH,

Clerk of Forestry for Ontario.

In view of the inadequacy of the method of planting trees in isolated lines, as a means of either modifying the climate, maintaining the timber supply, or regulating the distribution of moisture, the Bureau had in contemplation the recommendation of a more comprehensive system based upon the principles of forestry for encouraging the planting of trees in masses. It was, however, found impracticable to do this at the present time owing to the lack of the information necessary in framing a well-considered plan of this kind, more particularly as to the localities where reforesting is specially desirable. The returns compiled from the township assessment rolls furnished by the Bureau of Industries, which pur-

port to give the respective areas of cleared, waste and wooded land, are largely unreliable, as in many instances the assessors do not discriminate between wooded land and waste—much partially cleared or uncultivated land which should correctly be classed as waste being entered as woodland. A circular on the subject was sent by the Bureau to the township clerks last December, requesting them to call the attention of the assessors to the desirability of greater accuracy in classification, and judging from the replies received there is reason to hope that future returns will be more correct. Any scheme for reforesting should be prepared with a knowledge of the comparative needs of the different localities of the Province, as though over-clearance has left in many of the older counties but a very small percentage of land in timber—other well-settled localities have still a fair proportion of wooded land as compared with cleared. In response to the circulars sent out, various plans for the encouragement of tree-planting have been submitted. One which appears feasible and has been successfully carried into effect in Kansas and other Western States is the supplying by the Government of trees cheaply or free of cost to be planted in accordance with rules laid down by the Department. The Bureau has begun enquiries as to the cost of furnishing supplies in quantity of the most suitable species. Until, however, more information is obtained on these points it will be impossible to present a thoroughly matured plan. It is hoped, however, that this can be done before the next session of the Legislature.

While the Ontario Tree Planting Act was a failure in some respects, it was ascertained that one clause of it, that settling the ownership of trees planted on highways, etc., by the owners of adjoining property had been found very satisfactory in those municipalities where the Act had been brought into operation. In amending the Act it seemed to be desirable that this feature should become operative throughout the Province instead of being confined to those municipalities which had passed by-laws taking advantage of the Act. Letters had been received by the Bureau from various sections complaining of depredations committed upon shade trees by employees of telegraph, telephone and other electric companies and asking information as to the right to recover damages. In the municipalities which had not adopted the Act a doubt existed as to whether any such legal right could be maintained, with the result that the damage went on unchecked. In the recommendations made by the Bureau to the Department it was advised that in amending the Act the clauses giving adjoining property-owners rights of ownership over trees grown in the highway be retained and made generally applicable irrespective of municipal action, but subject to the provisions of the Municipal Act in that respect, which give municipalities power to regulate and control the planting of trees.

At the last Session of the Ontario Legislature, in accordance with this recommendation the Ontario Tree Planting Act, 1883, with amendments, was repealed and the following measure substituted:

AN ACT REVISING AND CONSOLIDATING THE ACTS TO ENCOURAGE THE PLANTING AND GROWING OF TREES.

HER Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

Short title.

1. This Act may be cited as *The Ontario Tree Planting Act, 1896.* R. S. O., 1887, c. 201, s. 1.

Planting trees on highways, etc.

2.—(1) A person owning land adjacent to any highway, public street, lane, alley, place or square in this Province, may plant trees on the portion thereof contiguous to his land, but no tree shall be so planted that the same is or may become a nuisance in the highway or other public thoroughfare, or obstruct the fair and reasonable use of the same.

Trees on boundary lines.

(2) Any owner of a farm or lot may, with the consent of the owner or owners of adjoining lands, plant trees on the boundaries of the adjoining lot.

Property in trees planted by owners.

(3) Every tree so planted on such highway, street, lane, alley, place or square shall be deemed to be the property of the owner of the lands adjacent to such highway, street, lane, alley, place or square, and nearest to such tree, and every such tree so planted on a boundary line aforesaid shall be deemed to be the common property of the owners of the adjoining farms or lots.

Property in shade and ornamental trees.

(4) Every growing tree, shrub or sapling whatsoever, planted or left standing on either side of a highway for the purposes of shade or ornament, shall be deemed to be the property of the owner of the land adjacent to the highway and nearest to such tree, shrub or sapling. R. S. O., 1887, c. 201, s. 3.

Municipal by-laws for granting tree bonuses.

3.—(1) The council of any municipality may pass a by-law for paying out of municipal funds a bonus or premium not exceeding twenty-five cents for each and every ash, basswood, beech, birch, butternut, cedar, cherry, chestnut, elm, hickory, maple, oak, pine, sassafras, spruce, walnut or whitewood tree, which shall, under the provisions of this Act, be planted within such municipality on any highway, or on any boundary line of farms as aforesaid, or within six feet of such boundary.

Inspector of trees.

(2) Such by-law may further provide for the appointment of an inspector of trees so planted; for their due protection against injury and against removal by any person or persons, including the owner, excepting as authority may be given therefor, by special resolution of the council; for the conditions on which bonuses may be paid, and generally for such regulations as are authorized by sub-sections 20 and 20*a* of section 479 of *The Consolidated Municipal Act, 1892.* 55 V. c. 42.

Report of inspector on state of trees.

4. The inspector shall make to the council one report for each year, if required so to do, giving the names of all persons entitled to any bonus or premium under the by-law, the number of trees of each species planted, and the amount of bonus or premium to which each person is entitled, and certifying that the trees have been planted for a period of three years and that they are alive, healthy and of good form; and upon the adoption of such report the bonuses or premiums shall be paid; provided that in no case shall the council be liable to pay a larger sum in respect of trees planted under this Act than would be payable if the same had been planted at a distance of thirty feet apart, and in no case shall a bonus be granted where the trees are less than fifteen feet apart. R. S. O., c. 201, s. 5; 53 V. c. 60, s. 1.

Right of refund from Province for bonuses paid under former Acts.

5. Where a municipality has, prior to the passing of this Act, passed a by-law under the authority of section 4 of *The Ontario Tree Planting Act* for granting bonuses for tree planting and has paid or has become liable under the said by-law for the payment of any premium or bonus with respect to trees planted prior to the passing of this Act, the Treasurer of the Province, out of any sum which may be voted by the Legislature for that purpose, upon receiving a copy of the inspector's report, certified by the reeve and clerk, may recoup to the treasurer of the municipality one-half of the sum paid by the municipality under the said by-law, the said report to be forwarded to the Treasurer on or before the 1st day of November in each year.

Penalties for injuring trees on highways.

6.—(1) Any person who ties or fastens any animal to or injures or destroys a tree planted and growing upon any road or highway, or upon any public street, lane, alley, place or square in this Province (or upon any boundary line of farms, if any such bonus or premium as aforesaid has been paid therefor) or suffers or permits any animal in his charge to injure or destroy or who cuts down or removes any such tree without having first obtained permission so to do by special resolution of the council of the municipality, shall, upon conviction thereof before a justice of the peace, forfeit and pay such sum of money, not exceeding $25 besides costs, as such justice may award, and in default of payment the same may be levied on the goods and chattels of the person offending, or such person may be imprisoned in the common gaol of the county within which the municipality is situate for a period not exceeding thirty days.

(2) One-half of such fine shall go to the person laying the information, and the other half to the municipality within which such tree was growing. R. S. O., 1887, c. 210, s. 8.

Injuring trees on boundary lines.

7. Any person who ties or fastens any animal to, or injures or destroys any tree growing for the purposes of shade or ornament upon any boundary line between farms or lots, or who suffers or permits any animal in his charge to injure or destroy or who cuts down or removes any such tree, without the consent of the owner or owners of such tree, shall be subject to the like penalties and liable to be proceeded against and dealt with as provided in the preceding section. R. S. O., 1887, c. 201, s. 9.

8. The council of every municipality may pass by-laws: Municipal by-laws.

(1) To regulate the planting of trees upon the public highway;

(2) To prohibit the planting upon the public highways of any species of trees which they may deem unsuited for that purpose;

(3) To provide for the removal of trees which may be planted on the public highway contrary to the provisions of any such by-law. R. S. O., c. 201, s. 10.

9. *The Ontario Tree Planting Act* and the Act passed in the 53rd year of Her Majesty's reign, chaptered 60, are repealed. Rev. Stat. c. 201, and 53 V. c. 60 repealed.

Tree Planting Independent of the Act.

In order to ascertain the extent to which tree planting had been carried on throughout the country independent of the inducements held out by the Ontario Tree Planting Act, the circulars sent to the townships which had not up to the end of the year 1894 drawn any bonuses from the Provincial Treasury under its provisions, requested answers to the following questions:

"Have any trees been planted on highways or on farm boundaries, and if so, with what success?"

"What species have flourished best and are regarded as most satisfactory for purposes of shade and ornament?"

So far as can be judged from the 288 answers received, many of which are indefinite upon this point, the planting of forest trees on or near highways, on farm boundaries and in other situations than immediately around the farm buildings, has been undertaken to a fair or considerable extent in 152 townships, and to a small extent in seventy-three others. Reports from fifty-four show that no planting of the kind has been done. In many of the latter the reason assigned is that there is a heavy natural growth of trees along the roadsides, or that the country has been but newly settled. The answers are surprisingly encouraging as to the success of tree planting on the highways in nearly all cases, instances of failure being altogether exceptional, and usually attributable to the prevalence of drought during the seasons in which the trees were planted. It is difficult to give any classification under this head, as in some cases the failure is only partial —trees set out at one time or in a particular locality having failed, while others in the same municipality are doing well. But the failures, total and partial together, amount to but a small percentage.

Most of the answers express satisfaction with the results of tree planting but some are disposed to consider the growing of trees along roadsides and farm boundaries a mistake, fearing that when the trees attain maturity the crops will be injured by too much shade. Crops cannot be successfully grown immediately under large trees, but there are very few farms indeed in this country so closely cultivated as to utilize every square yard of soil, tracts considerably larger than

the narrow strip which would be overshaded by a row of trees being left unproductive in almost every instance. The most obvious way of meeting the difficulty is to leave a margin underneath the trees unsown rather than dispense with them. The apparent loss will be more than compensated by the benefit received by the rest of the field from the protection of the trees acting as a windbreak.

In an overwhelming majority of cases the preference of those who have planted trees is for the maple. In most of the answers, in fact, it is the only tree mentioned as being planted, and where the planting has embraced several varieties it is nearly always given the first place. Where the distinction is drawn between the hard and soft maple the latter appears to be slightly the most popular—doubtless by reason of its quick growth. The only other hardwood tree which finds any general favor is the elm. In a few municipalities horse chestnut, ash, basswood and poplar are mentioned as having been used, but the latter tree is not regarded as satisfactory on account of its wide-spreading roots. Among evergreens, spruce is the favorite, the next in popularity being cedar.

Arbor Day.

The following questions as to the observance of Arbor Day by the schools and the planting of the school grounds with trees were submitted :

"Has Arbor Day been observed in your municipality? Have many trees been planted in school grounds? If so, how many of them lived?"

Answers to all or some of these questions were received from the clerks of 305 townships and 122 other municipalities. These indicate that in a majority of the schools the day is commemorated and more or less tree planting done, so far as opportunity offers. The results, however, have fallen very far short of what might have been accomplished had the work been more systematically and intelligently undertaken. The day appears to be generally observed by the schools in 211 of the municipalities, while in 129 others it has been sometimes or partially recognized. In eighty-six it has been ignored altogether, but it must be noted that these are in nearly all instances situated in the newer or more sparsely settled portions of the Province, where less necessity for tree planting exists. In most cases the observance takes the form of planting trees about the school grounds, but in some localities little if any tree planting is done, and the day is devoted to setting out flowers or cleaning up the grounds. In a number of the municipalities, especially in the older towns and villages the grounds have been for years well-shaded, or else are so limited in area that there is little need or opportunity for setting out trees excepting to replace such as may have died during the year. The most disappointing feature of the returns is the poor results of the work actually performed in securing a permanent and healthy growth of trees. A very large proportion of the trees planted on Arbor

Day appear to die shortly afterwards, either from having been improperly planted, from subsequent lack of proper care and attention, or from injuries wantonly inflicted or caused by the lack of adequate protection.

Teachers as a rule—in common with the general public—do not sufficiently realize the need of care and preparation in tree-planting. The general idea is that all that is necessary is to dig a hole in the ground, put in the tree, and fill it up again. Arbor Day exercises are too often conducted on this plan, no care being taken to prepare or manure the ground or to see that the precautions which a skilled gardener or nurseryman would adopt are observed. The saplings are perhaps planted, after they have been exposed to the air until their roots are dry, in a bed of hard clay or thin sandy soil with their roots crowded in anyhow instead of being properly expanded and the soil well shaken into the interstices. They are probably watered once or twice and then left to take their chance through the droughts of summer, and a very slim chance it is likely to be. Obviously where trees are planted on a play ground or adjacent streets and lanes they need to be surrounded with tree-guards to protect them against continual pushing and the danger of accidental mutilation or injury. It is too commonly the case that the interest of teachers and pupils in the growth of the school yard trees ceases with the Arbor Day ceremonial and that the unfortunate saplings are either left to perish of drought before they have fairly obtained a foothold in the soil, or being without guards, are so damaged by rough and thoughtless school boys that they either die outright or linger on, it may be, for a few years in a stunted and unsightly form.

Notwithstanding all these drawbacks, the answers received show a marked advance of public opinion on the subject. In the great majority of cases the attempt has at least been made to beautify the school grounds by tree-planting. In 240 municipalities, so far as can be judged from the wording of the answers, the grounds about the school-houses have been planted with trees. In 106 others there has been planting to a limited extent, and in forty-six no trees have been set out. So far as the answers respecting the success of tree-planting admit of classification, the results have been thoroughly satisfactory in 132 instances, and fairly so in fifty-two more. In seventy-eight municipalities the planting has been decidedly unsuccessful, while in eighty-six cases the answers to the questions are so vague and indefinite as to afford little or no indication as to the actual facts of the situation. It may fairly be presumed that in the most of such instances tree-planting has not proved a marked success.

Arbor Day it must be borne in mind is a comparatively recent institution and in some instances where the answers note a thriving growth of trees around the school-grounds it is mentioned that the planting was done by the trustees some time since. While it is not therefore possible to say how much of the improvement in the condition of school-grounds is due to the institution of Arbor

Day, there is no doubt that at least it has accomplished something in encouraging the planting of trees and developing among the pupils of our public schools the love of natural beauty. The defects in the system as at present pursued can be easily remedied.

In the first place teachers should receive brief and elementary instructions as to how to plant and care for trees, so that the mistakes so frequently made at the outset may for the future be avoided. Then all trees planted on Arbor Day or at any other time about the school grounds should be surrounded with a wooden or wire tree-guard to protect them from the otherwise almost inevitable consequences of exposure in a neighborhood where they are specially liable to be injured by rough and careless handling during schoolboy games. The general observance of the day will, no doubt, have a tendency to make public school pupils more careful, and by imparting an interest in trees lessen considerably the danger from wanton and malicious injury, but whatever progress may be made in this direction it will always be necessary to protect young trees during the first few years against accident.

Decrease of the Water Supply.

Answers to the questions, "How does the supply of water now obtainable from natural streams during the summer compare with that formerly existing? If any marked change has taken place, to what do you attribute it?"—were received from 267 townships. The general tenor of these replies, most of which are very positive, fully bears out the conclusion that in most of the longer-settled portions of the province, as well as in many parts where forest clearance has been by no means so general, the cutting down of the timber about the head-waters and along the banks of water-courses has resulted in a growing scarcity of water during the summer months. This change in the climatic conditions has attained such proportions as to be a serious cause of loss and inconvenience in most seasons. The injury to crops from the protracted droughts which of late years have become of frequent occurrence has been very great, and farmers in many localities formerly sure of a never-failing supply of water, often find themselves compelled to go miles during the dry season to obtain sufficient for their stock. Testimony is general and emphatic as to the operation of these causes in altering the climate of Ontario for the worse. The most serious feature of the situation as affecting agriculture seems to be that the evil is increasing in intensity year by year in proportion as the work of indiscriminate clearing goes on unchecked, and large tracts, which owing to their natural situation ought to be left in timber, are stripped of vegetation.

A considerable decrease of the water supply from natural streams is indicated by the replies from 171 townships; while in twenty-two instances the falling off appears to be but slight; in fifty-six cases no marked change is report-

ed; while the answers from seven townships are to the effect that water is more plentiful than formerly; eleven answers are too indefinite for classification. In by far the larger number of cases the diminution in the water supply owing to the lessening in volume or drying up of the streams is attributed to the clearing of the forests, eighty-eight answers giving this as the cause. The extensive drainage operations carried on, especially in low-lying and swampy parts of the country are assigned as the reason in twenty-nine instances and thirty-five replies, give both clearing and drainage as the causes of the decrease. In thirty-six answers, no cause is given. In the seven townships in which the supply is more plentiful than formerly, the reason generally assigned is some peculiar local condition, such as the flow of drainage from some adjoining section, the deepening of streams or the construction of dams. One instance, however, is worthy of special mention as a conclusive proof of what can be accomplished by re-forestation in restoring conditions more favorable to agriculture than those generally prevailing. "About forty years ago," writes Mr. William Gorman, Clerk of the Township of Grattan, "a great fire ran over the greater part of this section, and it was noticeable for a number of years that the water in our streams was less than formerly. But a second growth of trees has grown up on all the waste and unoccupied lands since. I believe in some measure to this may be attributed almost as plentiful a supply of water in our streams as fifty years ago when this section was all forest and lakes." This instance, where nature has been left unassisted to restore the equilibrium and re-clothe the devastated region, affords a striking evidence of what might be accomplished in many other parts where conditions are similar, by the replanting of waste lands which have been stripped of their timber by fire or the axe of the lumberman. The spontaneous springing up of a second growth, which in the instance specified, has wrought so beneficial a change, cannot always be depended on. It is apt to be tardy and uncertain, especially in localities where the situation is elevated and the soil light or stony, which as a rule, are precisely the areas where re-forestation will accomplish the most good and are the least available for agricultural purposes. Moreover if instead of leaving the work to the slow progress of nature, these barren uplands and hillsides were replanted, timber of a much more valuable character than the generally poor quality of wood which takes the place of the pines and hardwood of a fire-swept region would be secured.

FORESTRY ON THE FARM.

The essential difference between the work to be accomplished in the direction of forestry in the settled as compared with the unsettled portions of the Province is that while the preservation of the existing forests under public control can be effected by a few comprehensive changes in the law or administrative measures, the means to be adopted for the restoration of the woodlands in settled localities must be largely of an educational character. Legislation may do much in providing assistance and formulating a system under which the work can be carried on more economically and effectively than by unaided individual effort. But in a country where the rights of private property owners are so fully recognized as in Canada, the first and foremost requisite to the adoption of any comprehensive scheme of sylviculture as distinguished from governmental forestry operations is to convince the farmers and other rural land owners of its desirability. It is satisfactory to note that public opinion during the last few years has been rapidly coming to a realization of the necessity of preserving or replacing the woodland as a means of maintaining desirable climatic conditions. The heavy floods which now generally prevail in the spring as soon as the snow has melted—which have been particularly destructive this season by reason of the depth of snow—and the ensuing droughts of the summer have done much to force the subject upon public attention. The work done in this Province in connection with forestry, being mainly of an educational nature, has familiarized all fairly educated and intelligent men with the cause of these unfavorable changes, and thus paved the way towards practical action. The exhaustion of the fuel supply has also been seriously felt in many of the older counties. In short, the whole matter has been brought practically home to the people of the country districts as never before, and the more prudent and progressive farmers fully appreciate the need of conserving such remains of the forest as they possess.

Where there are a few acres remaining wholly or partially in timber, it is a comparatively easy matter to preserve them as woodland, provided the stock are kept out. In most instances, farmers, from mistaken ideas of economy, are apt to use the wood-lot, after it has been thinned out by cutting for fuel and has been partially overgrown with grass, as a pasture ground. This effectually prevents the forest reproducing itself, as it would do if properly managed. The stock trample down and consume the young seedlings and underbrush, and injure the exposed roots of the older trees, causing their premature decay. As the wood-lot is continually drawn upon for fuel, the grass-covered spaces between the remaining trees grow larger, and no young saplings spring up to take the places of the trees removed, and in a short time there is little left but a few stunted or rotting trees. If the cattle and sheep had been fenced out, a new forest growth would speedily have covered the ground in most places, and if, in addition, a little labor

had been bestowed in replanting any vacant spots remaining and thinning out the young trees where they grew too thickly, the productive capacity of the lot as a source of wood supply would have been maintained. It is always easier to preserve a remnant of forest than to undertake a new plantation, as the old trees furnish the best possible protection for the newer growth, and the soil, retaining something of the forest character, renders the work of man merely supplementary to that of nature. This subject is dealt with at length in a paper on "The Planting and Management of Woods," by Mr. A. Kirkwood, given in this volume.

The preservation in timber of existing woodlands throughout the cleared districts, though highly desirable, both in the interests of the proprietors and of the community, even if generally undertaken, would go but a short distance towards repairing the injury already done by over-clearing and providing an adequate supply of timber for future needs. The farmer or land owner possessed of tracts of land, which from the soil or situation are not adapted to tillage, should turn his attention to tree-planting as a commercial investment. At first sight no doubt such a suggestion may appear absurd to the farmer of the old school, who has taken little note of the great economic changes of the last generation. Having been trained to cut down trees at a time when trees were valueless and wheat dear, he has kept on in the same groove, regardless of the fact that trees are becoming increasingly valuable as wheat grows cheap. Though the depression in agricultural produce has forced itself upon him, he has not yet realized the other factor of the situation, viz., the increasing scarcity and dearness of timber. The business of farming is one which requires as much foresight, calculation and close observation of the tendencies of trade and social development on a large scale as does that of the merchant or the manufacturer, but it is too often the case that the farmer limits his forecast to the coming harvest and takes little thought of those gradual though sweeping changes which affect the conditions of his calling and render the old ways unprofitable. There are large areas upon which, whatever might once have been the case, it will no longer pay to grow grain, but where it will pay to raise trees, where the timber as a merchantable commodity will yield enough to give a handsome profit on the expense of planting and preservation in addition to the advantages of shelter and ornament afforded while growing.

The objection often raised to the proposal is that forest trees are a crop of such slow growth that the man in middle life who plants them is not likely to live long enough to reap the benefit. Supposing this were the case, the same is true of the most expensive commercial and industrial enterprises in which shrewd and farseeing business men engage. It is rarely that a man who builds houses to rent gets back his money with interest during his lifetime, or that the manufacturer or investor in railroad or mining stocks are recouped for their outlay in the course of twenty or thirty-five years, except in case of speculative investment where they run great risk of losing everything. In all investments where the

return is reasonably certain the yield is so small that the capitalist cannot expect to draw, during his life, in profit or interest the amount embarked. In most cases he has no such expectation. He is satisfied to know that his capital is safe and increasing, so that he may leave a provision for his family. It is precisely this large and farsighted way of looking at things, making plans for many years ahead and sacrificing immediate returns to the success of projects which may mature in the faraway future, which gives the business man and manufacturer so great an advantage over the farmer, who, as a rule, only looks twelve months ahead. It is true that the farmer realizes that agriculture, in these days of competition, is a business requiring as keen foresight and as shrewd an appreciation of the laws of supply and demand as any other business, that if he persists in the attempt to manufacture wheat, where natural conditions combined with market requirements demand the manufacture of wood, he has no more right to expect success than any other manufacturer who blindly disregards economic laws.

But it is not true by any means that timber growing is an investment purely for the benefit of the next generation. In the first place, the farmer who plants trees will in a very few years have the advantage of the protection they will afford to his crops in the adjoining fields. Acting as windbreaks and distributors of moisture they will, in proportion to the extent of the plantation, mitigate the extremes of the weather and break the force of parching or blighting winds. Apart altogether from their value as timber, they will beautify and render attractive, the farm, which, should the owner wish to dispose of it, will considerably enhance the price. While such esthetic considerations undoubtedly have their place in the discussion of the subject, there are some writers who are disposed to push them altogether too far and whose utterances give the impression that they regard a wood lot as something never to be touched wtih the axe. Scientific forestry has no sympathy with this idea. The wood lot, like the forest, should be treated so as to make it as productive as possible and the thoroughly matured trees should be cut away and the vacancies filled by new ones.

It is worthy of note that while the growing interest in the question is manifested by the number of letters received from farmers, asking for advise and information as to the planting of trees for windbreaks, shade, etc., but few inquiries have been made respecting the selection of varieties with a view to the commercial value of the timber. This is, no doubt, because of the impression as to the length of time which must elapse before a tree attains a commercial value. Recent observations and experiments have shown the fallacy of the generally prevalent ideas on this point.

The period required by a tree to attain maturity, or a profitable size, under favorable conditions, is much shorter than popularly supposed. It has been found that the white pine—probably the most valuable timber-tree in Ontario—

the period of growth which was formerly reckoned at 175 or 200 years, will yield merchantable timber after forty years growth, and several other trees can be raised to attain saleable proportions in probably even a shorter period. The ideas of most farmers as to the slow growth of timber-trees have doubtless been gained by noting the progress of saplings in the forest. This is misleading, as young trees set out in the open, or in a plantation where they have abundant space and light, grow far more rapidly than in the woods. The forest tree has from the first to struggle for its life against a crowd of competitors, and the result is that where the tangle of underbrush is thick they retard each other's progress, and it is only after years of struggle that some are firmly established and the others crowded out. One of these saplings, if planted out when a few feet high, would have been well advanced towards maturity, while its rivals were still in the sapling stage.

By planting some of the valuable kinds of nut-producing trees, such as walnut, chestnut and hickory, the farmer can ensure an additional source of profit from their yield, long before maturity has been attained, as their produce is always in demand. But even if no incidental revenue were to be looked for, a consideration which every business man would appreciate is that a plantation of trees of such kinds as possess a commercial value is an addition to the land-owner's capital. Such a plantation, though only of a few years' growth, and not likely to yield saleable timber for a generation, is nevertheless a valuable asset to be taken into account in estimating the value of the owner's farm, which increases each succeeding year. It possesses a value of the same character as a life-insurance or endowment policy upon which several payments have been made, which, though the amount cannot be collected until an uncertain or remote period in the future, will nevertheless always bring its price in the market.

As an instance of the comparatively rapid growth of white pine, Mr. Halladay, formerly Crown Timber Agent for the Mississippi District, relates that he knew of a farmer cutting some young pines on his farm that had grown up since he bought the place thirty years previously. These trees yielded two logs each, the bottom log being eighteen inches at the butt and fourteen inches at the tip. Unfortunately the rings of the trees were not counted, though the farmer was positive in his statement that the trees were not there at the time he bought the farm thirty years before.

Hon. John D. Lyman, of New Hampshire, in one of the most practical articles on tree-culture that has appeared in the United States, gives some figures as to the growth of young pines on his place, which tend to throw new light on this question. Referring to a group of trees, shown by their annual rings to be about forty-seven years old, Mr. Lyman remarks: "These trees, by proper pruning and thinning, would, I think, have been at least seventy-five feet in height, about fourteen inches in diameter four feet from the ground; the twenty-

foot butt logs, almost perfectly clear from knots, with some 60,000 or more feet of excellent round-edged inch boards to the acre." Mr. Lyman also gives the following account of another lot of pines standing on 108 square rods of land purchased by him as abandoned farm land, the young growth having been first observed by him in 1870:

Although but little if any over five miles from the large village of Farmington and close by the road in New Durham, it is not thought by the best judges there that I could have sold these pines and the land upon which they stand, when I first noticed them, for two dollars. Probably in 1872 or 73, I showed to Hon. I. P. Berry, who lives near, the thicket, and showing him how I would like to have them thinned, he did it admirably and took the bean-poles, stakes, fence-poles and wood which he cut out for his pay. They ought to have been thinned earlier. After this first thinning they were neglected for five or seven years. They had in this time grown quite fast and become crowded with live tops too small for continued rapid growth. Mr. Berry has often thinned them since, but I have never been able to overcome the injury done them by their not having been thinned at an earlier age than was their first thinning, and the long neglect immediately following that first thinning. Two years ago I cut one of the trees to find its height, size and age. It had in the stump either thirty-nine or forty annual rings, I am not sure which.

Not being quite able to agree with the chief of the Bureau of Forestry under the government at Washington, upon various points in the growing of timber as a crop, the chief sent Austin Cary Esq., to see and measure my pines, and he pronounced them as excelling any lot he had seen, and the chief upon receiving the report of the measurements declared them of exceptional growth and desired that one of the pines be felled and sections cut out at each ten feet and forwarded to him at Washington. Both chief and agent, Austin Cary, thought from their size that they must be much more than forty-five years old. The sections have been procured and forwarded. The pine sawed down had fifty-four annual rings at the stump where it averaged nineteen and a half inches in diameter. Its height was eighty feet. Its diameter at each ten feet inside the bark and its annual rings are as follows:

Diameter up	10	feet—	14	inches	.....	No. of rings	46.
"	20	"	$12\frac{7}{8}$	"	.....	"	"	42.
"	30	"	$12\frac{1}{8}$	"	.....	"	"	37.
"	40	"	$10\frac{1}{4}$	"	.....	"	"	32.
"	50	"	$8\frac{1}{2}$	"	.....	"	"	24.
"	60	"	$5\frac{3}{4}$	"	.....	"	"	15.
"	70	"	3	"	.....	"	"	8.

One of the smallest on the lot was felled and forty-three grains or rings were found in the stump where it was eleven and a half inches in diameter, and its height was seventy-two and a half feet. Their average age is not far from fifty years—perhaps nearer forty-eight years.

In January of this year a letter appeared in the New Jersey *Forester* from Mr. T. B. Coursey, of Frederica, Delaware, from which the following is an extract:

I bought a farm near this place in 1839, and in 1840 planted chestnut, walnut and pine trees on about eight acres. I was then in my thirty-fourth year, and have been cutting the timber for fuel and sawlogs for over twenty-five years.

The first growth of pine and chestnut have been mostly cut, but I have chestnuts still standing of my own planting that measure nine feet and six inches in circumference at the butt and six feet in circumference thirty feet from the ground, making three sawlogs each fifteen feet in length. I would still have some of my first growth of pine had I not allowed a friend to cut them for piling some years ago. He said that he could not find others tall enough to fill his order. I think they were eighty feet in length. At any rate, I have some second growth pine, which came from seed of the first growth, that are seventy-five feet high.

But little has been so far done in the way of replanting except upon roadsides or in lines along farm boundaries to serve the purpose of wind-breaks. Among those who have set out plantations of trees may be mentioned Thomas Conant, Oshawa; Allan Pringle, Selby; George Gooderham, Toronto, and T. M. Grover, Norwood, all of whom have met with gratifying success in their operations and done much to demonstrate by their example the advantages of sylviculture.

The setting out of trees in lines along highways or elsewhere, as provided for by the Ontario Tree Planting Act of 1883, though desirable for purposes of shade and adornment, can have little effect upon the climate or water storage, and will not produce commercially valuable timber. The repeal of the bonus provision, therefore, which had been taken advantage of to a very limited extent, is in no respect a backward step, but rather clears the way for more comprehensive legislation in accordance with the aims and principles of forestry.

WHAT TREES SHALL WE PLANT?

In considering the planting of trees for prospective profit in addition to the incidental effect on rainfall and climate, the questions requiring most attention are the selection of the lot to be planted and the choice of the varieties of trees to plant. Among the considerations determining the latter should be their adaptation to the character of the soil and other local conditions. Every farmer of course is fully aware of how much depends on the nature of the ground in growing ordinary farm crops, and would not attempt to raise any sort of cereal or vegetable in soil which experience had shown to be manifestly unsuited for it. To a large extent the same principle holds good in the case of tree-growing, and in undertaking to form a plantation the first essential is to be sure that the requirements of the varieties selected are suited to the land set apart for the purpose. It may be taken for granted that in most instances the lot devoted to wood-growing will be land of an inferior, rather than a good quality, as the latter will naturally be reserved for cultivation. While, generally speaking any tree can be got to grow on good land, other conditions being fairly favorable, some of the more valuable kinds will not flourish where the soil is decidedly of a poor quality, and to attempt to grow them would only result in disappointment.

For example, where it has been decided to plant a sandy, barren waste, pines will be found more profitable than the more valuable kinds of hardwood trees because of their greater adaptability to the soil. The white pine, while of course thriving better on good rich soil will grow on comparatively poor land, where ash or oak would make no growth at all. Recent observations lead to the conclusion that

White Pine

will make merchantable timber much sooner than is generally believed, and instances are not wanting to show that under favorable circumstances trees of this variety thirty years old have yielded good marketable timber. In fact the white pine is a rapid-growing tree and a valuable tree to plant, the principal drawback to its merits in this respect being the amount of care required in the earlier stages of its growth.

The Shellbark Hickory

is among the most desirable trees to plant for profit for the reason that it can be harvested when comparatively young and its nuts are marketable. If planted close together the young trees taken out in thinning have a value for carriage work. One cut of a hickory tree six inches in diameter will make about twelve or fourteen spokes. In small trees of say four inches diameter, the first two cuts are used for spokes the rest for head-blocks and other parts of carriages. Prof. Budd of Iowa, advises planting the nuts of the hickory where the the trees are intended to remain. If planted for forest trees and not for nut-bearing purposes alone the same authority advises planting the nuts eight feet apart each way with plenty of larch or tamarack seedlings between to act as nurse trees to the

hickory. As they grow up the larch may be cut away and sold. The price paid by the makers of carriarge wheels for hickory—which is now all imported from the United States—is such as to afford a return equal to from twelve to fifteen dollars per cord. The hickory grows best on a rich deep fertile soil and while it will succeed on ordinary land should not be planted upon sandy or sterile soil.

Among other valuable trees to plant in view of the increasing demand for their timber for manufacturing purposes are the black ash, rock elm and black cherry.

Black Walnut

is also extremely valuable, but it takes a long time to mature. Prof. Sargent estimates that a hundred years of growth would be necessary to make it merchantable timber, as the young wood has not that rich, dark color that gives it its great value, although it seems to us this is an outside estimate.

The Hard Maple,

although principally appreciated for its sugar product and as fuel, is also a valuable timber tree. It is used almost exclusively in the manufacture of shoe lasts, and is exported largely to Britain, where it is manufactured into mangle rollers and other articles. One firm in Ontario exported 100,000 maple blocks for mangle rollers in a year. It is also a tree of fairly rapid growth, and if planted close will make good timber that will not be materially injured by several seasons of tapping for sugar, while for fuel it is among the very best of our native woods. The soft maple, while favored by bee-keepers on account of its flowers, is not so valuable as a timber tree, and is shorter lived.

Of the evergreens, next to the white pine in value for planting is the

Norway Spruce.

For the purposes of shelter or as a windbreak it is very valuable, while its comparatively rapid growth—it grows more rapidly than our native spruces—makes it a valuable timber tree if planted in forest.

The Basswood

or Linden is another of our most suitable trees for planting. It is a rapid grower, its wood is much prized by carriage, cabinet, piano and organ makers, while its flowers furnish our bees with the choicest honey. Principally because of this latter feature one of our most prominent apiarists, Mr. Allan Pringle, of Selby, has planted this tree quite extensively, as has also Mr. Thos. Conant, of Oshawa, who, however, regards the black walnut as the more valuable tree to plant. The great number of uses to which this tree is put is very fully set forth in the article by Mr. Kirkwood in another part of this report.

The White Elm,

or Rock Elm; one of our most graceful and best shade trees which for streets is becoming yearly more valuable. The demand for the best quality of timber for the rims of bicycle wheels has assumed large proportions and makes it a valuable tree to plant. It is also used largely for wagon hubs.

PROCURING TREES FOR SMALL PLANTATIONS.

A paper on Arbor Day of a very practical character from the pen of Sir Henry Joly de Lotbiniere appears in *Forest Leaves*, a serial published by the Pennsylvania Forestry Association, for April, 1896. Sir Henry's contribution is especially valuable as embodying in a condensed form the results of long personal experience and close observation, and meeting a difficulty with which many who are favorably disposed towards tree culture have been confronted in the endeavor to accomplish something practical in the way of reforestation. Alluding briefly to the question of the scarcity of wood which is making itself seriously felt in many parts of the Province of Quebec, the writer addresses himself to those desirous of planting extensively to meet future requirements. At first sight, he says, the task seems impossible to the large majority on account of the difficulty of procuring young forest trees in any large quantity or suitable condition, Trees dug up in the woods and transplanted, so often perish, that those who plant them are discouraged. They are rarely in good condition, and the process costs too much in loss of time if not in money.

Sir Henry Joly's recommendation is that instead of depending on saplings taken from the forest, farmers should raise their own trees from seed. His suggestions on this point should be carefully studied by those who contemplate tree-planting upon any large scale:

"If you wish to have good trees in large numbers which will easily take root, without trouble and without expense, take them from a nursery and let that nursery be your own. Every farmer can establish in a corner of his garden a nursery of forest trees by sowing the seeds of the trees he wishes to have. With a little attention it is easy to tell when the seeds are ripe. Thus towards the end of June and early in July the seeds of the elm and those of the plane are ripe, if you sow them at once they will shoot up nearly a foot that same summer. The seeds of the maple, ash, oak, wild cherry and walnut mature in the autumn and it is better to sow them immediately than to keep them in the house all winter. Sow, let us say maple seeds half an inch deep and others in proportion to their size, two or three inches for nuts. Sow thickly and after the first year you can thin them by transplanting some. At the end of four or five years (more or less, for there are some kinds of trees which grow more rapidly than others) you can plant your young trees where they are to remain You should select cloudy or rainy weather in the spring, and without going from home, without trouble, without breaking the roots, you can dig up and replant immediately without giving them time to dry, a hundred young trees which will certainly take root again, and you will have spent less time than it would have required to get five trees in the woods which may or may not live. The trees will cost nothing, your children will soon learn to weed them and to take care

of them with pleasure if you encourage them a little by your example. At home the young children amuse themselves of their own accord in planting acorns and in seeing the little oaks grow. By means of seeds you can procure without expense an unlimited number of trees and plant little by little all your land which is unfit for cultivation and which should have been left in wood."

The writer adds a needed warning as to the necessity of fencing the nursery and the young plantation so as to protect them from the ravages of cattle. He goes on to say that in many cases even the trouble of sowing can be saved owing to the profusion with which seedlings spring up where the ground is favorable. The transplantation of these when the ground is damp will often succeed better than sowing, especially with the elm, the seeds of which are small and delicate. Pine seed also is difficult to gather, and if little seedlings are transplanted in early spring and sheltered from the sun until well rooted it is preferable to raising them from the seed.

Sir Henry presents these conclusions as the result of many years' investigation as to the least expensive and surest means of restoring the woods, and his acknowledged position as an authority on all matters connected with forestry and sylviculture render his observations of great value.

USES FOR FOREST PRODUCTS.

With the present rapid progress in industrial development new uses are continually being discovered for forest products. Woods that a short time ago were regarded as useful merely for fuel, are now becoming valuable in the mechanic arts. The changes that have recently taken place in this direction are so important, in view of the variety of our natural timber products, as to alter very materially for the better, any estimate that may be made of the total value of our forest resources. A few of these new factors in the calculation may briefly be noticed.

The substitution of steel and iron to a large extent in the construction of ships and buildings has lessened the demand for oak for these purposes, but the scarcity of black walnut and rosewood helped to cause a change in the fashion in furniture. Oak became the popular material and in consequence this wood is in greater demand than ever. Hickory is another wood that is also becoming more valuable. Where it was formerly used only for handles for axes and other tools, its present consumption in the manufacture of carriages has reached enormous dimensions. A new use for this timber is in the manufacture of handle-bars for bicycles, which are likely to be made in future from hickory instead of steel tubing. The bicycle, which seems to be effecting a revolution in business in many ways, has furthermore created a heavy demand for rock elm

which is required for the manufacture of rims. As only a small percentage of the timber is good enough for the purpose, the increase in the total cut caused by this new demand is very large.

By far the most significant and far-reaching change, however, arises from the rapid and extensive growth of the wood pulp and paper making industry. The great expansion of daily journalism in Canada and the United States has created an enormous demand for white paper, various kinds of wood being brought into requisition as the invention of new processes rendered them available for the purpose. With the rapid exhaustion of the forests of the United States the wood products of the Dominion are being more and more drawn upon to supply raw material for American paper mills as well as to meet an increasing home demand for the same purpose. The result has been to largely increase the market value of great areas of timber formerly held in very slight estimation. In some sections of Canada there are extensive growths of poplar, generally considered as an almost valueless tree—fit only for fuel and so inferior in quality even for that purpose as to be seldom used when any other was available. The discovery that by a chemical process the fibre of this wood could be used in the manufacture of paper caused a revolution and brought the previously despised poplar into the market. Another tree which, like the poplar, is apt to spring up profusely in the wake of a forest fire, and resembles it also in its reputation for general inutility, is the Pinus Banksiana or "Jack" Pine. This has also been found to be a valuable wood for paper-making, and the large quantities of it in Ontario may justly be regarded as a source of future wealth.

While poplar, basswood and jack pine are used in the manufacture of paper pulp by the chemical process, for the cheaper mechanical process by which most of the pulp used in newspaper making is produced, spruce is almost exclusively employed. The spruce forests of Ontario are of vast extent and stretch to the far north surrounding Hudson's Bay. Many of these northern forests are composed exclusively of spruce trees, growing so densely that, although very old, they do not in some sections attain a diameter that would make them available for lumber. Until the rapid strides of the pulp industry drew attention to this raw material awaiting the future demand these forests were not largely taken into account in the stock-taking of the Province. This is now changed, however, and spruce rivals the great white pine in its value to the state. It is now pretty generally conceded that Canada has the largest supply of spruce, the great paper-making material, in the world. As the supply in the United States becomes exhausted there can be no doubt that the spruce forests of Ontario will prove a source of wealth to the Province, the extent of which it is difficult to estimate.

Besides the industrial changes that have made these woods of greater value than was thought possible a few years ago, improvements in the methods of

lumbering during the past year or two have rendered available areas of timber land previously out of reach, and added to our national wealth vast quantities of forest products thought to be inaccessible to the lumberman. In taking account of our forest wealth it has not been customary to consider as an asset the large pine area north of the "Height of Land,"—the elevated table land from which our rivers flow both north and south. As the logs have been cut in the forest, they have been floated down the rivers to the mills in the southern part of the Province. As the rivers north of the Height of Land empty into Hudson's Bay, which is frozen during a great part of the year, the possibility of establishing mills there and seeking a northern outlet for the product was not considered. Recent experiments have demonstrated, however, that it is cheaper to saw the logs into lumber at mills placed in or near the timber limits and ship the lumber out by rail than to float the logs to the mills where the distance is very great. As an example the firm of Gilmour & Co., with very extensive mills at Trenton, are now building a mill at their limits in Algonquin Park, to saw up the cut which will then be shipped by rail over the new Ottawa and Parry Sound Railway. Previously these logs were floated to Trenton, the time required for the transit sometimes extending to two years. The new plan is found to be more economical and effective. Under this system the Height of Land and the difficulty of securing an outlet for the cut of the northern region present no obstacle to the utilization of our extensive areas of spruce, and there are now many companies being formed to manufacture pulp in various parts of the Province.

The uses of wood pulp are almost innumerable. Besides its main utility in the great paper industry it is employed in making building materials of many kinds, armor-plating for ships, cannons, bullets, car-wheels, bicycles, pails, tubs, barrels, and similar articles, while another inventor has recently discovered and is now working a process of making silk cloth from the fibres of trees. It is said to be an excellent substitute for the product of the silkworm and a company with a large capital has been organized in England to work under the patents.

Thus as iron or other materials are substituted for wood, new uses are found for the latter, any marked decline in one direction being fully made up by an advance elsewhere. So that from a survey of the whole industrial field there appears no reason to anticipate any falling off in the demand for the forest products in which Ontario is so wealthy.

LUMBERING ON FORESTRY PRINCIPLES.

The harvesting and manufacture of a timber crop in this country is in most cases exceedingly wasteful as compared with the methods in vogue in France, Germany and other European countries. There, where scientific forestry methods prevail, the trees are felled in such a manner as to injure the growing crop of trees as little as possible, and besides the logs cut for lumber or timber the tops and branches are utilised for fuel or other purposes. Here in America the lumbermen after selecting the trees, cut them down in the quickest and cheapest way possible, without regard to the young timber; the main part of the tree is cut for logs or timber while the tops and branches are left on the ground to provide fuel for the disastrous fire almost sure to follow and destroy what young trees the choppers have left standing. In addition to the vast amount of waste material left in the woods there is the further waste at the mills where the logs are sawn into lumber.

There is one firm in Canada, however, whose methods of lumbering and manufacture of forest materials present a marked contrast to the operations of most of our lumbermen. This firm is

The Rathbun Company,

with head-quarters at Deseronto, but with mills there and elsewhere. The writer had the pleasure of inspecting the various industries of this firm at Deseronto and Napanee mills, where he was very courteously received and shown around by Mr. E. W. Rathbun, General Manager of the Company.

I had, in a general way, understood that the Rathbun Company employed methods somewhat different from most of our lumbermen and that those methods caused a consumption of many forest products usually considered as waste material and treated as such. My ideas in this respect fell far short of the reality. The Rathbun Company is unique in Canada if not on the continent. Originally a lumbering concern purely, cutting down white pine and sawing it into deals, they seem to have been impressed with two ideas, the attempted realization of which has revolutionized their business and sent it into different channels from that of ordinary lumbering. In the first place it became apparent to them that in a few years at best, with their at that time improvident but immediately profitable methods, the supply of white pine tributary to Deseronto would be gone and they would have to leave the place where they had made their home, and seek new fields; with the alternative of making a radical change in their method of working. Secondly, the enormous waste incident to the lumber business in Canada appealed to them as it doubtless has to other lumbermen, but unlike other men in the trade, they set out to find a remedy for this

and to devise means for the profitable converting of what had formerly been waste material into a manufactured product, affording employment for labor and a profit for the capitalist. For thirty years these two ideas seem to have been kept in view by the Rathbun Company and the result is a vast industry, giving employment steadily and directly to three thousand men—indirectly to many more—and by its consumption of waste materials in the forest and mill adding greatly to the wealth of the Province.

The Rathbun Company float logs, cut from their own limits and bought from settlers, down the Napanee, Moira, Salmon and Trent Rivers to Deseronto, and by the Madawaska and Calabogie. Considerable quantities are also brought in by rail, over a thousand car loads of cedar and non-floatable timber coming in this way yearly. I drove from Deseronto to Napanee Mills to see the annual timber drive which was then on the way down the Napanee river. It was not a very handsome lot of timber from a lumberman's standpoint. It was composed of "all sorts and conditions" of logs. There were some good sticks of pine, but there was also every kind of log that would float, large and small, straight and crooked, smooth and knotty logs partly burnt, in fact everything light enough to float down the river. I was informed the drives coming down the other streams were similar in quality. Upon reaching Deseronto the logs are separated and to some extent classified. The cedar is taken to the cedar mill, a large and substantial structure where cedar, tamarac, etc., is worked up and where a large number of men are employed. When the logs are hauled up into the mill, if large enough, they are sawed up into lumber, now become vere scarce. If the log is not large enough or good enough for lumber it may do for a couple of railway ties, in which case it is sawn in two and flatted, or it may make a tie and a fence post, or two fence posts, leaving enough over at the end for one or more blocks for street paving. In some cases the log has to be made into shingles, but it is a pretty tough stick that is not manufactured into something, if it is no more than steam. The saw-dust is used partly for fuel, as is that from the other mills, which I will further refer to. With the other logs the process is similar. In the case of pine and spruce, waste pieces that cannot be made into lath may be long enough for matches, and if so they are cut up into match splints and exported to England. This branch of their business, though of quite recent date, already gives employment to nearly one hundred hands. Short pieces of lath not long enough for use as lath are cut to regular lengths and sent to New York to be made into banana crates. Oak, maple, cherry, ash, birch, butternut, tamarack, and other woods are used in ship and car building. Of the timber found unfit to be sawn into any kind of lumber or square timber the worst and roughest is sent to Napanee mills to be used in the Portland Cement works to make steam or burn lime and hydraulic cements. Other of the rough wood is fed to the sixteen big bee-hive furnaces or kilns and is made into charcoal and a

variety of other articles of commerce. A cord of wood will produce forty-five bushels of charcoal, and quantities of alcohol, acetate of lime, oil of tar, pitch and pyrolignate of iron. These ingredients are distilled from the smoke of the wood during carbonization in a large building erected for that purpose. Scarcely any wood is consumed in the process of carbonizing the contents of the kiln, as this is affected by means of the gas generated from the wood being carbonized, the generating of this gas being started by a small quantity of wood placed in a small arch inside the kiln. When this quantity of wood is consumed the gas does the rest of the work. Of the product of the charcoal works and the chemical works, nearly all, except the alcohol and the acetate of lime is exported to the United States. The charcoal is sent to Detroit and is used in smelting iron. Their output would run a twenty ton iron furnace, and it seems odd that with so much iron ore of good quality as is known to exist all through Eastern Ontario this *charcoal* should be sent to the United States to be used in making *iron* there. Some day, let us hope, capital may be found willing to take the risk of trying to develop this industry in Eastern Ontario. The greater part of the saw-dust and small chips and blocks, too small to be worked up into any thing, is used to make steam, but a considerable portion of the saw-dust is sifted, mixed with an equal quantity of clay and made into a building material now coming into very general use, known as Porous Terra Cotta brick. This brick possesses some remarkable qualities and is fast growing in favor with the building trade. It is said to be absolutely fire and frost proof, is a good deadening material for partition walls in houses, is very warm and dry, will stand a very heavy crushing strain and is very light in weight. It can be sawn and nails can be driven into it as into wood. When heated to white heat, sudden immersion in water will not make it crack. It is a new use for a by-product of the forests and it is likely to become very general.

Some years ago finding it necessary for the continued life of their industries the company promoted the construction of railways, notably the Bay of Quinte railroad, for the purpose of bringing to their mills wood that could not be floated and which, without railway communication, was valueless to them as limit holders and to the settlers as well, While this road was built mainly in the interest of the Rathbun concern, it could not fail to be of great benefit to the settlers in the section of country served by it. Such has already been the case, for in addition to affording a market for the settler's hard wood timber it has provided an outlet for his grain and his stock. Fifteen hundred tons of live stock went over this road last year mainly from the townships of Hungerford and Hinchinbroke, a new territory only recently settled. The building of this road discovered the existence of an immense bed of marl and this led to the establishment of an

extensive plant at Napanee mills where Portland cement, pronounced by experts to be fully equal to the imported article, is manufactured on a large scale. This uses up several thousand cords of rough wood every year.

There are two very prominent features that strike one in connection with the Rathbun concern. In the first place I could not but be impressed with the idea of the interdependence of the various industries: each new industry seems to have been the logical and natural outcome of some other industry, all of them dependent in the end on forest supplies. Owning large timber limits on which ground rent had to be paid to the Province each year, no matter how much of the timber was cut off, there naturally followed the advisability of cutting the hardwood timber as well as the pine and other evergreens if profitable uses could be found for it. Accordingly the raw material of the forest is made up by this firm into ships and railway cars, and lumber, and doors, and windows, and lath and shingles, and railway ties, and fence posts, and packing boxes, and barrels and match splints, and bricks, and charcoal, and alcohol, and other chemicals, and power, for use in Canada and for export to Africa and to Europe and to the United States. The forest is the base of all these industries, they are all intimately related and Mr. E. W. Rathbun is enthusiastic in the opinion that the rounded circle of them all will not be complete till the carbonized product of the big bee-hive furnaces is used in the manufacture of iron in Ontario instead of being sent to the United States to perform that function there. Another striking feature of the Rathbun works is the idea of permanency that must have actuated the directing minds of the company in the establishing of their various industries and in the erection of the buildings that house them. Mainly solid stone and brick structures, all connected by railway tracks of standard gauge, they present a marked contrast to the temporary wooden structures generally built by lumbermen and which from the usually short life of their business in one place, answers their purpose quite as well. The Rathbun buildings are evidently intended to stay for a long time and their timber policy seems to have been, so far as circumstances would permit, based on the same plan, that of permanency, and they have endeavored to so husband the supply of timber as to ensure the continued life of the Deseronto works at the expense perhaps of a larger and more immediate profit. In other words they have pursued a policy in their lumbering operations more in line with scientific forestry in many points than most other firms engaged in the business. Holding limits for many years under rental they have, so far as is consistent with an adequate supply of timber for their mills, largely limited the removal from their own limits to the matured, dead and fallen timber, buying the rest of their supply from settlers who were clearing land, and keeping their own smaller timber for future use. Even in buying from settlers I am told they have tried to prevent them from cutting so freely as to deforest land they did not need for tillage, by advertising their will-

ingness to buy only a fixed quantity in a given section and, by distributing their purchases over different sections, discourage too heavy cutting. Settlers soon discover that it pays them better to cut their biggest trees, leaving the smaller ones to grow, thus ensuring a steady crop for which they are sure of a steady market. If the Rathbun Company afforded the only market for the settlers' timber in the vicinity of their limits they would be able to a large extent to prevent the too rapid deforestation of land that would grow timber and little else, but unfortunately or fortunately as the case may be—according to the point of view—they are not in that position and the settler, be he a *bona fide* settler, desirous of carving out a home for himself, or the timber pirate, in the guise of a settler whose object is to despoil the Provincial treasury by obtaining timber free from dues, may skim the land of all its timber wealth, thus destroying largely its value for settlement purposes and increasing the fire risk, and in most cases find a market for it, if not from one lumberman then from another. In the case of the actual settler, however, this is not so apt to be the case. The value of heavy belts of trees in protecting the rest of the farm, to say nothing of the great value of a steady yearly crop of timber and firewood on a farm is becoming now so well known that men anxious to establish a home in a timber country are not so likely to destroy the future prosperity of their family and the fertility of their farms by denuding them of trees as was too often the case when the older portions of Ontario were settled. In the case of the fraudulent settler, however, the man who makes a false application for a location for the purpose of stealing the timber from it and then getting out, no care for the future welfare of that particular spot of the earth disturbs him; his object is "to beat the government" out of the timber dues, losing sight of the fact that he is not beating the government but his neighbors, if he has any; beating the people, whose property are the trees. That there are "settlers" of this description there are too many proofs and I have reason to believe that were it not for the unceasing vigilance of the Department of Crown Lands the class would be much more numerous than it is.

THE PLANTING AND MANAGEMENT OF WOODS.

A. Kirkwood.

When it is considered how much the produce of woodland is in daily request, and how indispensable to the practice of very many of the most useful and necessary arts of human life, it cannot but appear a matter of some importance to ascertain in what manner this produce may most advantageously be increased, and raised in the state of greatest perfection. In such case, public and private interests point most unequivocally to the same object; and when, under the influence of motives drawn from either or both of these sources, plantations are to be raised, it is obvious that the same motives will apply with equal force to the right disposition of them in the ground; and afterwards, to the managing of them properly, according to the several natures of the trees, and the uses in which they are to be employed.

Amidst the numerous varieties of forest produce, there are some species of trees, which, in every undertaking of planting, are entitled to particular attention. At the head of these may be placed the oak, the pride and glory of our woods; along with which, as of the same class, and hardly yielding to it in value, may be ranged the maple, the hickory, the ash, the elm, etc. Among resinous trees, the red and white pines are of principal use; to which, as also of very great promise—it may now be said, indeed, of approved importance—may be added the spruce and the tamarac. A pleasing and not unprofitable diversity may be sought from the culture of numerous other kinds; such as the beech, the chesnut, the locust, the black walnut, the black cherry, the black birch, the bass, and the hazel. Some hardy sorts, though less capable of being themselves turned to useful purposes, would claim some consideration as excellent nurses for other more valuable species of wood; a remark which may be extended to some of the aquatic tribes, as well on this, as on the further ground in some degree implied in it, of their prospering in situations which could not so advantageously be disposed of in any other way.

In regard to the soil and climate best adapted to the several kinds of forest trees, various observations might be made, were it conceived that, by much minuteness on this topic, any very useful purpose could in effect be served. The parts of the territory of any country that can be devoted to planting, must be such only as may be spared from other harvests, of which the returns of profit are generally greater, as well as more immediate, and the use still more indispensable. Thus limited by necessity, it may be added, that these trees do not appear, for the most part, to be in their own nature remarkably fastidious, but will prosper amid circumstances diversified considerably in different instances. Thus, for the oak and the other species associated with it, the most congenial soil

is perhaps a good fertile loam, or something approaching to that character; but they will all succeed also on sandy or gravelly land; and, some of them at least, on clays. The same observations may be extended to a very great proportion of other deciduous trees—often without any variation, even as to the particular terms—almost always, in its spirit and tendency; and the finest pines are found, perhaps, on sloping hill sides of rather a gravelly texture; but they may be seen thriving also remarkably well, where the principal ingredient of the soil is of a loamy, or even of a clayey nature.

This degree of latitude in regard to the soil, with the corresponding range which may with equal impunity be admitted as to climate, is of great consequence, for the facilities it affords in the formation of woods. A judicious planter will be cautious, however, of using liberties in which he does not find himself fully warranted by experience; or even of going to the utmost verge of what may have actually been done before him;—more studious of use than of singularity, or of the doubtful praise of an adventurous prosecution of hazardous projects. It may be remarked, in general, that the more valuable species of trees are, for the most part, not patient in any very considerable degree of moisture; and that for that, as well as other reasons, a sloping situation, and a sound porous bottom of freestone or other rock, are commonly very favorable circumstances in planting. It is also to be observed, that great luxuriance of growth in the outset, is but an uncertain criterion of the advantageous disposal of plants which are to be formed into timber;—it ought, indeed, in some instances, to receive quite an opposite interpretation; as it is sufficiently known what the danger is, that the effects of such an early forwardness may be perceptible only, or chiefly, in the deterioration of that produce. This is so remarkably exemplified in particular cases, that the same tree, according as it has been situated in one way or in another, will be useful for many valuable purposes after it has been taken down; or, serving merely for shade or ornament during the period of its growth, will afterwards be good for nothing, unless, perhaps, for fuel. Indeed, so very striking is the difference between the quality of pine trees raised amidst the rigors of a northerly climate and a mountainous situation in the Highlands of Scotland, and of those which have been often produced in the low country, under circumstances of apparently so much more indulgence;—so incomparably superior is the one timber to the other, that they have frequently been judged to be of different species. There is no necessity, however, for such an explanation. That difference is sufficiently accounted for by the greater or less rapidity of their growth, which has been found sometimes in the proportion of four to one; and of which the effect is, on the side of the quick growers, a great accumulation of matter, but of a soft, spongy, and unformed character; on the other, a smaller increase of bulk in a given time, but that of a texture, firm, compact and hardy.

There are several ways in which trees may be propagated; but the best and easiest mode for the generality of those cultivated in our woods, is to raise them from the seed. This may be done either on the principle of producing, in the first instance, young plants that are to be removed afterwards into the situations in which they are to remain; or the seeds may, from the beginning, be disposed where the trees are to grow. Each of these methods has, perhaps, its advantages. In favor of the first, it may be said, that it gives the opportunity of selecting such a piece of ground, and of bestowing such pains in the preparation of it, as well as in the tending of the plants during their state of infancy, as affords the most reasonable prospect of obtaining them in a sound and healthful state. Growing luxuriantly and freely in a good soil,—protected carefully from the too severe influence of the sun and weather,—refreshed, as they may appear to require it, with water, or by the application, at proper seasons, of a little good earth, or other fertilizing substance,—every weed, as it makes its appearance, being eradicated, and the ground held always in an active and nutritive state by frequent stirring; the probability is, that there may be formed such large and vigorously rooted plants, as will be able, from the strength of their constitution, to encounter successfully the difficulties eventually to be met with on poorer grounds. Whereas, if raised from the first on poor land, or less anxiously cared for, there might have been a danger that they would never have been able to recover the early check thus given to their growth, or have arrived ultimately at any tolerable perfection. It may be added, that, on the system of a certain previous training, a vast quantity of young trees may be disposed of for a time on a small space of ground; thus leaving the wider extent, on which they are afterwards to stand, open, during the interval, for other purposes; and diminishing, in the same proportion, as the limits are contracted, the labor and the expense of one and the same degree of effective culture. In conformity with such views, it is found, that a seminary of good land, for the first reception of the seeds, with a nursery, in which the plants, after being formed there, may still farther expand themselves in the manner stated, are commonly regarded, among planters, as a sort of necessary appendage in the prosecution of their labors.

It is to be observed, however, on the other hand, and in recommendaton of the plan of raising trees at once from the seed, that in this way, all that reniteney and regret will be avoided, with which there is much danger, that a plant, taken from a better, should settle on a worse soil. No early habitudes being to be overcome, it may be supposed, and the idea has been often verified by fact, that a ready alliance will take place between the embryo plants, and their nurse and mother, even in circumstances the most untowardly, and that so, in the event, very valuable timber may be obtained, where it were hardly to have been looked for under any different management, even from among the roughest rocks, and in other situations of the most unpromising sterility. It may further be remarked,

that as the tap root of all trees corresponds with the leading shoot, so, when that is cut off, as in planting from the nursery, the tendency to an upright growth is diminished and an inclination produced to divaricating into branches; a propensity equally hurtful, where the object aimed at is timber, as it would be beneficial with a view to fruit. It is to be considered also, that the whole period that trees are nursing, instead of being the means of serving, in any point of view, as might be conceived, is in fact generally pure loss; for, if a seed, or seedling plant, be put into the ground along with another plant of some years old, the first will commonly overtake, in a short time, and even outstrip the other. This will indeed happen so soon, that in the view merely of shade, shelter, or ornament, it is but a mistaken practice to aim at expedition, by the preference of old plants; and the effects may be of a more seriously hurtful kind, if the same principle should be acted upon in the propagation of timber. For not only are trees raised from seed, or seedling plants, the first commonly to arrive at maturity, or may indeed precede those transplanted from the nursery by some years, but they have the fairest chance also for reaching the greatest size, and will yield the best and most valuable produce. Instead of any increase of expense to be incurred for these purposes, it is pretty evident, that the balance will be quite on the other side. A piece of ground may be sown with the seeds of forest trees, for a smaller sum than would be necessary to plant it; and, for the whole previous cares of the seminary and the nursery, the only equivalent required will be the continuance, for a very little time longer, of the attention to keeping clean the ground on which they are so placed; even that, perhaps, being done upon the large scale system, by which so often a very competent adequacy in the effect is reconciled with a remarkable economy.

It will be perceived, that in the claims of merit thus set up severally for the different modes of raising trees from seeds or from plants, there is, in some instances, the appearance of clashing between them; the same things, or nearly so, being stated successively in proof of the superiority of the one and of the other. To account for this, it is not sufficient to advert generally to the partiality of men to their respective systems, though that might have its weight. There may be many circumstances, in particular cases, to affect the conclusions arrived at, which do not exist in others, and which may very naturally produce diversity of sentiment on such a topic, independently of any bias in the minds of the observers. Amidst the great variety of situations in which trees may be disposed—the difference between these trees, both as to kind* and quality,—the minute and imperceptible diversities which may occur in the treatment of them,—it would be indeed rather wonderful, if, from premises the same in their leading traits, but so susceptible of tinge from all these quarters, one uniform and undis-

* Undoubtedly, something will depend, in this question, on the kinds of the trees; in which point of view, it may be observed, that some of the most valuable species of our forests, however they may thrive in either way, will seem to succeed best when raised at once from the seed. Thus the oak, the pine, etc.

puted result should be obtained. It is well, however, to know what are generally considered to be the advantages of different modes of proceeding in any operation, especially to understand distinctly what is the precise ground on which these benefits are supposed to rest, that they may be aimed at respectively, and, if possible, though conceived of commonly as the adjuncts of distinct systems, be united under the approved one. This, it is presumed, may be affected to some extent, in the case under consideration: and the remarks that have been just made, if otherwise of less importance, will not be without their value, if they can be of any service towards suggesting the particular points which ought especially to come under such adjustment, or for furnishing a clue, by which it may be attempted with success. To explain what is meant by an example:—It will be recollected to have been stated in favor of the mode of raising trees from plants taken out of the nursery, that such plants bade fair for being well rooted, in consequence of the genial nourishment afforded them in that situation. Now, suppose it should, for other reasons, be determined in some instances, to raise a plantation directly from the seed, it need not be forgotten of how much moment it is that the trees should have large, well-formed roots; and it being observed, at the same time, that the means of securing this object is to give them, in their early stages, the advantage of good deep soil, it will be understood, that everything that can be done easily towards loosening to some depth, and meliorating the ground on which the seeds are to be sown, will be properly attended to in the order of their culture. In like manner, it has been mentioned, in recommendation of the system of sowing, that the infant plants being thus, from the very first, accustomed to the precise soil and situation in which they are to grow, there is no room for anything of that repugnancy, which might with reason be dreaded, if, after being nursed for a time on rich fertile land, they were suddenly to be removed to places comparatively cold, bare, and unfruitful. The inference to be drawn by those who have it in view to plant from a nursery, is, that the soil and exposure of the nursery should, as much as possible, correspond with those of the ground on which the trees are afterwards to stand; and that, when a nursery or seminary is to be formed directly on account of some great undertaking of planting, a piece of the same land should be employed for these purposes, which it is in contemplation, through that medium, to cover with wood.* This principle of happy adaptation might be acted upon in other particulars, and undoubtedly with such good effect, that every advantage which is sought in the

* The importance of this agreement, in soil and climate, between a nursery and the ground to be planted from it, has been called in question, upon the principle that it defeats, in some measure, the intention of nursing; for, if no more genial nourishment is to be found in the nursery than in the field, why not as well set out the plants, from the beginning in the latter. To this it may be replied that it is not to be understood that the nursery ground is to receive an superior advantages in point of cultivation. But, after every allowance for this, it is answered, that there may still remain a much similarity of character between the more and the less improved lands, originally of one description, that a just proportion between the intelligence of the nursery, and the privations of the field, cannot be better, or more uniformly maintained, than by attention to the rule here given. From the contiguity of the nursery to the grounds to be planted, this further advantage is incidentally gained, that they may easily be stocked from it, without any danger to the roots of the young plants, such as they would be exposed to, if carried from a greater distance.

formation of woods might, so far as depends on the circumstance alluded to in their early management, be, in the one or the other way, almost equally secured.

It would be superfluous to enter at present into any particular detail respecting the preparatory operations by which land is to be brought into a proper state for the reception of those rudiments of trees, whether seeds or plants, which are to be laid out in it. The principal points to be attended to in that matter, have been already incidentally mentioned, and are indeed sufficiently obvious; and, in the mode of execution, there is little or nothing peculiar to the business of planting. In all cases, the instruments for reclaiming, deepening, and fertilizing an uncultivated soil, are the trench and common plows, brake, harrows, etc., seconded in their effect by the genial influences of the sun and air, manures, and meliorating crops; in the due use of all which, the state of the ground, and such other matters as can come under the personal observation only of the cultivator, must be his guide. In general, it will be of consequence, that the soil be stirred always to its full depth, and that it be allowed then to remain for some considerable time mellowing, previously to its being stocked with plants. When the season for this work has arrived, it may be proceeded with upon principles of more or less regularity, as may be judged expedient or necessary, in the view of keeping the ground afterwards clear of weeds—a circumstance on which a great deal of the ultimate success will depend, whatever be the variations which, in other respects, may be admitted into the mode of culture.

During the preparation of the land for the object in view, it may be made serviceable towards defraying the expense so incurred, by being placed once, or more, as opportunity will allow, under crop. This economy may be carried farther; and the seeds of a grain crop be thrown into the ground at the same time with those of the forest trees. The reaping of it need not be at all detrimental, even to those of the plants which will have advanced farthest before this work has begun; and, in respect of the shelter which they may derive from it during their period of greatest tenderness, it will, in effect, rather go to add to their security. There is, indeed, a degree of precariousness as to the growth of plants raised in this manner from the seed; against the extreme incidents of which it may be proper, after every other precaution being taken, to have in reserve a small seminary of contemporary plants for the supply of vacancies.

Planting on Rocky Ground.

It will be understood sufficiently, that the circumstances of particular grounds must often limit them, both as to the extent of their prior cultivation, and the manner in which they are to be furnished with plants. No one can imagine that the same standard of culture, applicable precisely to good, level land, will be suited equally to rocky and mountainous places. To the latter, no plow having access and the narrow spots of earth which it may be necessary, perhaps, to search for

in them with an attentive eye, being disposed in no regular order, the utmost that can be done, or which it would be proper to attempt, in such circumstances, is to give the best preparation that may be, to the sites, individually, on which trees are to be planted. Indeed, some of the hardier kinds may often grow to good timber, though committed originally to the earth without any preparation whatever. It is a very common practice, on moorish grounds, to take up a turf merely here and there; and the soil being stirred a little, to distribute, in the spots so imperfectly cultivated, either immediately, or some time afterwards, the seeds or plants. Even this slight culture is, in many instances, dispensed with; and the only thing done (what is absolutely necessary for the introduction of the plants), is to bore a hole through the upper surface for their reception.* The only equivalent for the shelter of a cultivated crop, as above alluded to, must, in such cases, be drawn from the scrubby growth which is so commonly the product of poor grounds; and of which a part being cut and laid round the roots of the plants, may be of some use, by preventing the earth from becoming too dry, and opening in hot weather, so as to expose them to the noxious influences of the sun. For it is to be observed, that, however heat and light are in other respects necessary to vegetation, the roots of plants should never, if possible, feel their force, unless through the medium of the soil; and that, therefore, seeds, as soon as sown, should be carefully covered; and plants, being allowed to remain in the nursery till the ground is prepared for their reception, should then be immediately put down into it, and secured by a close cincture of earth against external injury.

Space Between Trees.

The distances at which it will be proper to set out seeds or plants for intended woods, will vary, in like manner, with so many circumstances connected with the manner of growth, or other habitudes of the different kinds of trees, the quality of the soil, and the nature of the climate, that it is only in very general terms that any rule can be given on the subject.† It may be remarked, that the closer trees stand to each other, so as it be in conformity with all just limitations imposed by these or other sound principles, the greater is the prospect of their

* What may be necessary, sometimes, to rest satisfied with, from the impracticability of anything better, it would, however, be very improper to substitute, on any occasion, without such necessity, for a more thorough culture. There may be grounds which would not admit of an uniform cultivation of their whole surface, which yet, in the particular places to be planted, may receive without difficulty, a full equivalent for all the advantages of that mode of preparation. The beneficial tendency of such care is certainly not problematical. Even in the extreme case of a soil contained almost wholly in the upper turf, it would, without doubt, be of use, that this turf be rotted before planting. The only question is, how that compactness of form might then be retained, into which it may be necessary that so scanty a soil should be moulded, in order to its affording any tolerable support or security to such a crop.

†From two to six feet are the common distances at which plants are set out in the fields, or at which they are brought to stand afterwards, when raised there from the seed. Perhaps there is more of ingenuity, than of useful tendency in some of the observations that have been made relative to the precise form in which trees should be disposed. No doubt, a given extent of land may receive more plants upon one principle of arrangement than upon another; but, as these will not grow up perpendicularly from the roots, and the approximation of their heads is the standard by which, eventually, their bearings towards each other must be adjusted, it does not seem evident how a very anxious attention to this point, in the first instance, should be really of any great importance.

rising to a good height, straight, and free from side branches, of such considerable size as, by giving occasion to knots, would be a matter of injury to the timber. In the Highlands of Scotland and some of the northern parts of the European continent, where we meet with the finest specimens that are anywhere to be found, of the pine kind, the common management is to sow very thick, or to leave it to nature so to disperse the seeds, which are, without more ado, left to shift for themselves. Amidst the contest for nourishment which soon begins to take place among them, the consequence is that the stronger and taller plants, having smothered the weaker, those that remain continue to draw each other up till they arrive at a great height. The means of extending themselves in any other direction being cut off there is no impediment to their upward growth. The lower branches, deprived of sun and air, quickly fall down; the overtopt plants are gradually involved in the same fate; till, by the acquisition of more space around them, the master-trees, adding thickness to their previously acquired height, become those examples we admire of noble trees and most valuable timber. It may be added that in exposed situations close planting has the effect of making the several trees a shelter for each other, thus operating, in a very essential point, to the preservation of the woods. For the hardier species of trees this is perhaps the only security that can be had recourse to in such circumstances, but as the object is of much consequence, it will be proper, where the means of defence are more diversified, to make use of them all against dangers which will probably be augmented in proportion. It need not be said that some of the most valuable timber trees, though far from being of a delicate character are yet more liable to injury from exposure to the weather than others.

Shelter Belts.

It is easy to perceive the use which may be made of this distinction in the practice of planting. It is to form, out of the more durable kinds, a screen for the protection, against the blast, of those which would be more apt to shrink under its influence. In this way, it is usual to draw an edging of firs round a plantation of oaks, or other hardwood, and to mix some of them in the body of the wood. The birch is another tree extremely well adapted for such a purpose, indeed superior to the other, in the view of mixing in woods. As the rate of its growth, being in a better proportion to that of the oak particularly, and their disposition to come up kindly together more favorable,* the danger is small, that, in seeking to avoid one inconvenience, another should be incurred. The hardy nature of the mountain ash, with the quickness of its growth, makes it very proper also to be

*Though the likings and repugnancies of plants to each other may depend indeed on no other principle than the habits of their growth, according to which they are more or less apt to inflict or to sustain injuries, either below or above,—this makes no difference as to the care of preventing these; which is just as necessary in that case, and may give occasion to the same proceedings, as if there were some antipathy between them.

used as a nurse, during the early progress of plantations, on exposed grounds. And the larch, with every advantage for this purpose in respect of foliage, stature, and whatever other qualities are best suited to it, is the more deserving of preference, on account of its superior value as a timber tree.

Time to Plant.

The best seasons generally for the propagation of timber, either by sowing or planting, are the latter end of autumn, and the earlier part of spring.* The precise period for the former of these operations, might appear to be in some measure determined by nature herself, and to be those in which the various seeds fall spontaneously from the trees. But these seeds, like others, may commonly be kept for some time, without injury to their germinating principle; and it is frequently necessary so to treat such of them as are shed in the end of the year, in order to avoid the depredations of field mice and other vermin through the winter. Other circumstances will have their effect here, as well as in the alternative case of planting; the fittest time for which is to be ascertained by various considerations of the nature and state of the ground, joined to the forwardness of different species in regard to vegetation. Land that is wettish, and which, by swelling with the frost in winter, would be apt to throw out the plants at that season, evidently ought not to be planted until the spring. Grounds, on the other hand, which are so dry as to be particularly subject to be parched by the heats of summer, would be more advantageously planted in the end of autumn; or, if the planting is delayed till spring, it should take place so early in that season, that the trees may be thoroughly rooted, before being tried by so dangerous an opposition. There may be occasion for the comminution of the soil by exposure to wintry frosts previously to planting, more on some lands than on others. And, as the periods of the vegetation of different plants are different, a regard to these differences may be useful in various ways, towards directing to the most advantageous times for this work.† In such transactions, it need not be added, that a great deal will, of course, depend upon the weather, and the forwardness of the season, in different years, as well as upon the magnitude of the operations, which may make it necessary often to begin earlier, and continue later, than otherwise might have been done. It ought always to be attended to that the planted grounds be fenced very carefully against the inroads of cattle of any sort, and even, if possible, of hares or rabbits, which, by gnawing the bark of the young trees, and the heavier animals, by treading them down, might soon make of no avail all the previous labor.

*A good, perhaps the best, season for planting pines, is towards the end of the summer, (the latter part of July or August).

†Thus, there is no time better for removing plants, generally, than just before they are beginning to shoot. Those plants which soon take root, and begin to grow, may in like manner be safely set out in such dry grounds as have been alluded to, later in the season than those which remain longer dormant after transplanting.

Care of the Young Trees.

After a plantation has been formed, it will cost little more trouble, for a few years, than keeping it clean. The way in which this is to be done, will depend on the same or similar circumstances, as have already given a face of uncertainty, in more than one instance, to the preceding observations. In some bare sites, it may be of advantage that the surface should have a covering of grass, both as a binding to the light soil which, on mountainous places, would otherwise be in danger of becoming the sport of the winds and the torrents, and as a useful auxiliary against the injurious effects of excessive droughts. In such cases, it may be enough to cut down merely the tall growing weeds with hoes. In other instances, a more uniform going-over the ground will be proper; but then, in compensation, it may be practicable, by the alternate use of a double-shelving and common plow, to abridge hand labor, reserving it to be employed in supplement of that more expeditious mode of culture.* It may be remarked, that as it is evidently the neatest, so, eventually, it will be also the most profitable husbandry, carefully to destroy all weeds at their first appearance; for, when cut down in their tender state, they immediately die; whereas, if suffered to grow old and strong, they are apt to shoot again after being cut; to ripen their seeds; and so to poison the whole surrounding soil. The frequent stirring of the ground, it may be added, is of the greatest consequence to the progress of the young plants, independently of any ulterior design, by putting into action its vegetative powers, and bringing them into a state of happy co-operation for that important purpose, with all the benignant influences of the sun, air and rain.

In three, four, or six years, more or less, according to the kind of trees and the fertility of the soil, the young planting will generally have advanced so far, as to be itself competent to choke and destroy the weeds which may for the future venture their heads above ground. It will be understood, that, from the beginning, attention has been paid to fastening such trees as may have become loose, and replacing those which have failed; in result of which, we are to suppose that we have now a plantation, a few years old, upon the whole healthful and in good order.

It may have occurred previously to this period, or it may still happen, that, some of the trees showing a tendency to become stunted and crooked, means must be used for their recovery. The proper proceeding in such a case is, at a time when the sap is down, and after the plant has been completely rooted, to cut it over to the level nearly of the ground; in consequence of which, a clean lead-

*It is but fair to mention that the introduction of the horse-hoe into plantations, is a practice that seems liable to considerable objection. So much so, indeed, has it appeared to some, that they have conceived it would be better to dispense altogether with the cleaning of them, any further than it could be accomplished by other means. Undoubtedly, very great care will be necessary, where recourse is had to it, that the plants may receive no injury, either from the plow or the working animals. It may be added, that it is but a small proportion of such lands as are usually planted, which would, on any account, admit of this mode of treatment.

ing shoot may be obtained that will soon overtake the contemporary trees. This mode of treatment is so grateful to many of the ligneous tribes, that the vigor of their growth is evidently, and in some cases, very greatly promoted by it; a fortunate circumstance, as the operation is so often, from natural or accidental causes, rendered necessary for the most valuable kinds of wood. It is frequently wanted for the oak, that king of our forests;* and in respect to the chestnut, the timber of which is, in some respects, even superior to that of the oak, it is of such consequence, that it has been given as a general rule, that all plants of this sort, without exception, should be so headed down, if, instead of scraggy and crooked, we would have them to grow with one strong and straight stem, and to make a rapid progress. It need not be said, that even among deciduous trees, there are some, however, comparatively tender of their heads: while, in respect to the pine tribe, they must be entirely excepted from this operation, as, in them, the loss of the leading shoot is the certain loss of the tree.†

The circumstance which has thus been alluded to lays the foundation of a considerable distinction between different sorts of woods, namely, that some of them will, and others will not, admit of being converted into coppices. It is evident, that any tree which will not spring again after being cut down, is wholly incapable of this application. It does not follow, that all those which are capable of it, would be advantageously disposed in that way; but they are at least so far qualified; and, as may be judged expedient in particular cases, may be either coppiced, or left to grow for timber; or the two objects may be in various degrees combined and united.

Pruning.

There has been already occasion to remark with what success the progres of the pine kind is in some instances, left entirely to nature. It would, perhaps be a legitimate inference, from what was then stated, that they require very little aid, in any stage of their advancement, from the care of man; it is certainly not to be doubted that much interference with them would be superfluous, most probably injurious. In the northern countries of Europe‡ it is esteemed an injudicious practice to thin their woods for fir till the most vigorous trees are arrived at the height of about twenty feet. The space for their growth is then a little enlarged by the removal of the low and smothered plants. The degree of attention to them is, of course, not increased as they advance in age. At length they are cut down, and a provision made for stocking the land anew in a like simple way, merely by leaving a few of the trees and harrowing carefully the ground

*This is to be understood chiefly of planted oaks. Those raised at once from the seed, are by no means liable, in an equal degree, to the disorders which render such an operation necessary.

†The larch differs, in this respect, from the rest of its tribes; and, when the first has been destroyed, will push out a new leader like deciduous trees.

‡ Livonia, Courland, Poland, etc.

around them for the reception of the seeds as they drop in the spring. In the parts of France in which plantations of these trees used to be raised the mode of treatment was different. Instead of the upper branches being left from the beginning to kill those below by depriving them of air, the system there was to prune them regularly; in which respect, so uniform was their practice, that certain rates had come to be established, according to which the labor was paid for in faggots. In payment of a first pruning the whole faggots were bestowed on the workmen; at the second they had two and the proprietor one-third of them; and the third, and all after dressings, were purchased with one-half of what should be lopt from the trees.*

If it were proposed to form a comparison between these two principles in the management of fir woods, it would perhaps be unfair to take the examples from countries which differ so much from each other as to climate, when our best observations would lead us to believe that it is of no small consequence to the strength and health of this particular species of timber that it should be formed amid what may be called a comparative torpor of nature, in places visited but sparingly by the rays of the sun, where the period of vegetation in each year is short, and its degree far from luxuriant. It is, at the same time, the less necessary to institute such a comparison, as the matter which it would go to determine is indeed a little in obscurity. It is sufficiently known that pruning, of which the tendency is to retard, for a little, the growth of all trees, is particularly productive of that effect on those kinds of them which never put out any new shoots in the places where they are so treated. It is, besides, almost impossible, in lopping the branches of such trees by the bole, at whatever season, to prevent the wounds becoming blemishes. Still it is acknowledged that recourse to this expedient may be more justifiable, and even necessary, in one set of circumstances than it would be in another. In the case of woods set out upon grounds not favorably distinguished, to say the least of them, for soil or climate, and which are at the same time, perhaps, even more than sufficiently stocked with plants, it will seldom happen that there will be such luxuriancy of growth in a horizontal direction as may not be held in just check by the interference of one tree with another. But where everything in the disposition of the plants is perfectly in the reverse of this—when, after having been nursed for a season or two in dressed ground, they are removed to land comparatively fertile and allowed a clear circumference around them in which to extend both roots and branches—it will not be surprising, if the occasion should arise, sometimes, for putting in practice what may be so far preventive of the total ruin of timber not likely, in any event, to have been of the first quality. The conclusion is, that if pines be planted only in the most suitable soils and situations, and there disposed more

* By such returns in fuel, with the greater ones in resin, plank, etc., the pine lands of France became considerably productive.

closely than is usual for the general run of planting, they will seldom have any need of pruning. If it should appear in any instance indispensable, still it must be adminstered with caution; and it may commonly be best, instead of cutting away entirely the too exuberant branches, to shorten them only by some convenient plan, leaving the remainder of them to decay and drop off, as they will do, in the course of nature.*

Thinning.

An operation of more undoubted legitimacy, in respect of the resinous class of plants, is thinning, the period of which may indeed be retarded a little where the use of that other would not be improper; but it will in all cases require at length to have its place in the management of plantations, and it will be of no small consequence that it be introduced at a fit season, and that the work be conducted on correct principles. It will be understood from the remarks already made that a certain closeness, in the growth of pines especially, is of very material importance both towards their attaining a desirable height, and in order to the timber being of that quality which is justly esteemed the most valuable. Still, proper limits must be observed in this respect, that no bar may unnecessarily or unprofitably be thrown in the way of their earlier progress, or when they have advanced so far that thickness alone is wanted to give them their proper perfection, that they may not be without room and nourishment adequate to that object. Thus, though it is evident from what has been formerly stated, that a plantation raised from the seed, and in which, of course, it is to be supposed, that the several plants will stand sufficiently close to each other in the first instance—though even such a plantation may commonly be trusted to right itself by a natural progress—yet undoubtedly a slight assistance in different stages of its growth might be of use by relieving the ground, on the one hand, of part of a burden, to which it could not, at all events, permanently be competent; while, on the other, this should be done to such an extent only as would not, in any other respect, be of injurious consequence to the trees or the timber. It is extremely difficult indeed to lay down any precise rule as to the degree in which thinning should take place in different instances, or to fix the most proper time for its being put into execution. So much will necessarily depend on the more or less vigorous growth of the plants and the various circumstances of soil, situation and climate, by which one plantation is distinguished from another, that, in short, there could not easily be a principle adopted of a more deceitful nature than one which, in this department—it may be added in the operations generally connected with planting—should lead to an implicit and uniform adherence to any single set of directions whatever. It will therefore be understood to be

* Perhaps the only circumstances under which it will be advisable generally to use the knife, in the case of resinous trees is, when there appears a rivalship for the place of leading stem; then the one of the competiting branches must be removed of course.

brought forward merely in example, not to be proposed as a standard, if, in the observations following, any instance occurs of particular definiteness; and, while the spirit of the remark into which such appearance of precision is admitted may be proper to be retained, it may often happen that, with equal reason, that exterior garb ought to be laid aside.

Suppose, then, that in twelve or fourteen years, it has become necessary to thin a plantation of pines, it is to be observed that this work should be performed gradually, a beginning being made from the middle of the ground, while the trees on the outside are allowed to stand for some time longer in their former state of closeness, the better to screen those within from the cold. By and by, when these have acquired so much strength, or have become so far habituated to the change in their condition as to be less in danger of suffering from a further admission of cold air, the business may be proceeded with, till, by degrees, the whole wood is put on such a new footing, in regard to distance as its advanced age and the increased size of the trees require. It will be always a fit object of attention that, as far as possible, they may be the most unpromising plants which are removed in this manner to make room for the growth of the others; and as the roots of these trees never shoot again after they have been once cut down,* but decay in the earth, it will be proper, instead of digging up, merely to cut them over close by the ground, both in the view of saving unnecessary labor and that no injury may be done to the roots of the remaining plants.

Therefore it is to be understood that it will be better, generally, to take down a few trees in various successive years than to suffer the whole of what it may be proper ultimately to remove, to grow up together till they are carried away by one or more great operations; still it may be of use to have in view always certain outline boundaries by which the distribution of these minor strokes may be advantageously adjusted and regulated. In conformity with this idea an interval of time of about the same length as the former may be pitched upon as a period after the lapse of which the occasion will have arisen for a second thinning. This it will of course be proper to conduct in the same orderly and progressive way as before, which, being duly brought to an end, there may perhaps be little need for any further repetition of the work. In the result the trees may be left standing at the distance of from eight to twelve feet, which will be sufficient room for their growth, even after size of body has become the object especially to be attended to; and it is fit, in that view, to encourage more than formerly a spreading bushiness at top.

Between the thinnings alluded to, there may be taken off, to the extent of a half perhaps, or even two-thirds of the whole plants bestowed at first, or

* The pitch pine, *Pinus rigida*, throws up sprouts the spring after the stem has been felled, but never attain any considerable height.

allowed, after rising, to continue on the ground, at the earliest period specified, these will have advanced so far as to be capable of being employed for some useful purpose. Their value will increase with their age; and, supposing the portions of them removed at the several standings condescended upon, to be nearly equal, and circumstances in each case to be favorable to the advantageous disposal of them, the returns, it may be expected, will go a great way, not only to covering the expense of planting, but also to paying the rent of the land, if the estate be so held. The further and most considerable profits must be waited for, till the trees have arrived at full maturity; in their progress to which, as they will commonly, after having proceeded so far, stand in need of very little more assistance or care, they will hardly be any otherwise chargeable than as they continue for some time longer to occupy the ground.

A principal circumstance which will go to produce a different order in the management of deciduous trees, from that just laid down, is the same which makes it practicable to obtain from them more frequent returns of profit. It will be modified, at the same time, by various other causes; such as the rate of growth of different sorts of trees—their tendency to shoot out in one or another direction their patience under the knife,* and the degree in which they can bear up under, or will be benefited, or the contrary, by a freer or more limited admission of sun and air. Amidst these and other grounds of diversity which have place in respect to different, or even the same species, the only general rule that can with propriety be given on the subject is, that so long as the branches of the several plants do not interfere with each other, and the form of their growth is such as we would wish, they should be allowed to remain untouched; when they begin to be crowded in any part, it is to be observed whether this be the consequence of the undue elongation of some struggling branch or branches, or of the regular advancement of the plantation. In the one case, relief may be given by cutting away those excrescences which, by diverting the course of the sap into improper channels, would be in every view only injurious: in the other, room must be made for the further progress of one part of the trees by the removal of another. When these are not all of one, or of equally valuable species—as, for example, when young oaks are nursed in the wood by the hardy birch—the first enlargement of the spaces for growth by either of these means will, as far as is practi-

*Though deciduous trees, in general, bear pruning better than those of the pine kind, yet there are some differences between them in this respect according to the species. Opinions vary, too, respecting the degree in which it should be admitted in any case, as well as about the manner of its execution. Without entering fully into these topics at present, it seems at least evident that a leading shoot should always be carefully cherished at whatever expense to any branch that would come into competition with it. It must be also highly expedient that every branch which is to be removed should be disposed of before it has grown to any considerable size; and, therefore, that the ground should be gone over with the view of discovering what may be wanted in this respect every second or third year. It is believed that it would be for the ultimate good of the timber, as well as advantageous to the appearance of the trees, that the greater part of what is to be lopped off should be cut away close by the bole, leaving the wounds to be covered over by its bark; though, on the other hand, it has been recommended, in order to detaining the sap at particular places for the better nourishment of the trees, that those branches likely to rival the stem should be shortened only so as to check the luxuriances of the growth in those directions, while they continued to afford, so far, a channel for the circulation.

table, fall naturally to be derived from those of the least consequence. When there is no such distinction, or after it has ceased to exist, the point for consideration will be that while regularity is had in view as much as possible, those should be the trees cut down always, which seem the least prosperous and healthful.

Coppice.

It was said that the detail of thinning trees may be affected in some degree by the practice of coppicing. This may be the case, even where the object ultimately in view is the production of full-grown timber. It will be understood that what was thinning in respect of trees which, being once cut down, spring no more, is not precisely so for such as shoot again from the old roots. For the permanent enlargement of the spaces between trees of this description, it will be necessary that those of them taken down should be wholly extirpated. But this principle of thinniug having heen acted upon to the necessary extent during the first stage of the growth of the plantation, it may be suspended temporarily at a proper period, and a certain equivalent for its effect derived from a partial coppicing. A crop or two of underwood may thus be obtained at the same time that the necessary facilities are afforded to the further progress of the trees. It is evident, however, that this substitution can be only of short duration. The stools must be in due time stubbed up, as the roots were in the case of the first thinnings, and the whole benefit of the soil left clear for the growing timber. From any ill-judged attempt to reconcile completely in this case the immediate with the future profits, the issue would most probably be the disappointment of our expectations as to both ; for if the underwood were left after the trees had spread so far as that their heads met it would not be of much value, and yet the stools would draw away a great share of their proper nourishment from the timber trees. A choice between the two must therefore be made at a fit season and that management followed which is suited particularly to the proposed object.

Among the various kinds in that description of trees which admit of coppicing, some are adapted chiefly to that mode of treatment, being such as arrive not at great stature, or of which the timber, when full grown, is not of the most valuable quality. Of this character may be esteemed the hazel, the birch and the greater part of aquatic trees, so called—poplar, alder, willow. Other coppices are formed of oak, ash, hickory, chestnut and the like. All those species which, while they thus yield useful underwood are, in their state of maturity, the principal sorts of timber. The purposes to which these several products are applicable, are not less different than the kinds of which they consist. While the highest praise of some is that they make good fuel, others are immediately serviceable in more than one of the arts of life, from the twig which is formed

into the broom or the basket, to the pole that is of such various use in husbandry, or the details of different kinds of mines. It will be readily conceived that the same indefiniteness as to the times of doing certain things which there has been occasion so often already to admit, will have place, too, in the economy of the coppice. When it is said that willows, according to their kind, and the purposes for which they are intended may be cut down every second or third, or every sixth or seventh year, poplar every fourth or fifth, birch every sixth, hazel every seventh or eighth, alder every ninth or tenth, chestnut every tenth or twelfth, ash every fourteenth or fifteenth, oak and hickory at all ages from eight or ten to twenty-five or thirty years. It is evident that this is no more than a sort of relative information which it may be useful indeed in respect of the common application of different sorts of young wood, and what is known of their several growths to have in view in some parts of their treatment, but which absolutely fixes nothing. The only criterion by which the period for cutting down coppices of these or other kinds, must be finally determined, is the use to which it is proposed that their produce should, in the particular cases, be actually applied. It is by a reference to this only that the size can be ascertained of which the wood ought to be: on the question of its having reached this size, though one about which nothing could be very precisely concluded beforehand, will always be of easy solution by a bare inspection. As to the use itself, it is evident from the nature of the thing, that it cannot be unvarying; but, even in regard to the same species, will be regulated by the demand in the market, or by the occasion of the individual. No less than for the attainment of one and the same size of timber, different lengths of time will be requisite, according to the goodness of the soil and climate.

This general observation may be made on the subject, that while, with a view to a greater value of timber, the falls must of course be more distant; on the other hand, it may be expedient to shorten these periods sometimes, as well in subserviency to the proposed use, as for the purpose of thickening the underwood. This effect will be the consequence of that management by its tendency to give room and air to many seedlings, the springing of which would otherwise be retarded or prevented; at the same time that it will call forth more vigorous shoots also from the original plants. It is of material importance that a just measure should be observed always in this matter of closeness, and that for that end all clusters of plants should be brought within proper limits, and rotten stubs wherever they appear be extirpated, the vacant places being filled up, or not, as may seem necessary in the actual state of the wood. The same standard by which will fall to be determined every other question of rooting out, introducing new plants, layering, affording more or less of encouragement which may arise during the progress of the copse to its proper maturity.

When this has taken place, and a cutting is about to begin, it is to be attended to, that the manner of executing it be such as may favor most a succeeding spring.* For this purpose the trees should be taken down close by the ground, leaving the stubs slanting, smooth and with the bark uninjured. The stems proceeding from stools in like manner are to be cut over by the level of the stools, all ragged points around the woods being dressed up carefully, and everything left even and uniform. The grounds may then be gone over about midsummer for two or three years successively, and the superfluous spray be rubbed off by the hand. More shoots than it would be proper ultimately to preserve may be allowed to advance a certain length, as a security against accidents. A selection is to be afterwards made among these, and so many of the fairest and most promising saplings being preserved as the roots or the ground can properly maintain, the rest may be destroyed. It will be of advantage in various ways that coppice should, in their first designation, be so laid out as to grow for several falls. This will have the effect of equalizing in some degree the extent, and with it the price of the labor best owed on them during a succession of years. The market will be less in danger of being overstocked at particular periods with their produce while it is ill supplied at others. And if the number of divisions be made to correspond to the age at which it is proposed that the underwood should be cut, it may, after the attainment of the first of them to that point, be counted upon for a regular and constant annual income. Hence, in places where fuel is scarce, or where there is, from other reasons, a demand for such produce, this becomes a very advantageous method of applying land, towards which there is the further favorable circumstance that no sort of grounds almost, but may, through some plant or other, have it put in practice upon them.

Care of Timber Trees.

When a wood, instead of being disposed of in the manner just stated, is to be allowed to stand for full grown timber it is to be considered that though it will not be necessary to watch over it in the advanced stages of its growth with the same assiduity as during its infancy, yet, to neglect it then altogether would be so far to defeat the object of all that early care. Trees, in general, are very susceptible of management; those that are inclined to become crooked may be made to grow straight, and the straight crooked by proper treatment; the spreading may be made to close, and the close to spread. It is true there may be too much of this management as well as too little; it may be ill directed, ill applied, and in every way so injudicious, as, in effect, to bring on those very disorders which it ought to have been its part to prevent or to correct. The examples which are to be met with, of woods injured, and very materially, from each of

*In respect to the season for felling coppices, the same principles will apply generally as for large timber. The ground must always be cleared of every thing so timeously as not to interrupt the next growth, and fenced as at the beginning.

these causes, while they indicate on the one hand the necessity of a certain attention being paid to them, prove with equal clearness that this must be under proper regulation, and never separated from the exercise of a sound judgment.

That the juices of trees may not be exhausted unprofitably, it will be proper that the care should still be continued of removing superfluous branches by timely pruning, and that suckers and parasitical plants should be extirpated as speedily as possible. The various injuries from certain states of the ground, from winds, or from the intrusions of reptiles, insects or other animals, must be counteracted seasonably and met with proper remedies, and if the management has not from the beginning been in proper hands, it will often be not the least object of care to correct or to remove the effects of former ill-treatment.*

To go over the various disorders to which trees are subject, describing minutely the approved means of cure in each case, would lead to some length of detail into which it is the less necessary to enter, as, on the one hand, these remedies are for the most part of a simple and obvious nature, and on the other, the great preventive of diseases, in general, is to hold the wood from the first under proper training. Let the ground be always kept free from stagnant moisture, the room for the growth of the trees enlarged as may seem necessary, so as, eventually, they may stand at the distance from each other of twenty or thirty, or even more feet, if their tops should spread so far as to require this; let the toppings to be taken off be removed so early that it may be done with the least danger to the body of the tree, and be cut over with a smooth clean stroke in the direction of the growth. Let these things be attended to and there will be, for the most part, but little to do in the way of effecting cures. But supposing it should still unfortunately happen that some trees should get covered over with moss, that water getting lodgement should threaten the decay of some of them, or that canker, with pestilential breath, should appear in any instance to have begun its fatal progress, then let the earliest opportunity be taken of removing such external coating, of scooping away the parts more inwardly disorded, and of putting nature again in the path to recover her lost tone and to restore a suspended vegetation. The longer these operations are delayed, after the occasion has arisen for them, the more critical they will become, and proportionably more will be the delicacy required in every respect to their successful performance. With every attention to these points, after the utmost caution in cutting out what is infected, in covering up the tender parts, which would in consequence be exposed,† by proper applications, in watching generally the

*The reclaiming of neglected plantations, as happens in all other instances of a similar kind, is commonly a more difficult task than it would have been to have trained them properly at first. Each operation of pruning or thinning will be the more hazardous in proportion as it has been too long delayed, and will require accordingly to be performed by so much the more an experienced and cautious hand.

†Even in cases of ordinary pruning, when any branch of rather large size has been lopt off, it will be proper to protect the trees from injury of weather by rubbing the wood over with tar, paint, or some such substance. In the more difficult part of remedying disorders, it may be necessary in addition sometimes to lay over that a cap of lead.

symptoms of the disease as well as the tendencies to a cure, the result will in different cases be far from being certain. But an extreme and final remedy is always within reach, which is to cut down, in whatever stage of their growth they may be, such trees as, admitting of no hope of restoration, would only become the worse for having their term further prolonged.

We learn, from many examples, to how very great an age trees, when favorably circumstanced, will attain without showing any symptom of decay, and what a proportionate vastness of size they may at length acquire. It is not, however, in any degree necessary to wait their arrival to this ultimate maturity before cutting them down. They will yield perfectly good timber at much earlier periods, and it will be a question rather of adaptation to particular exigencies, or generally of economy than any thing else, to fix in different instances the proper age of felling. The season of the year most advantageous for the purpose, it might have been supposed, would admit of little doubt, but it is known that considerable differences of sentiment have prevailed on this point both in ancient and in modern times. In general, it may be observed, that so far as the timber is concerned, it will undoubtedly be of much importance that the felling should take place at a time when there is no exuberance of sap in the trees, that is sometime between the autumn and the spring. An objection may be made to this season, in respect of such trees as afford a useful bark, on account of the difficulty of stripping them when taken down at those times. To determine between these opposite claims, the ready way is to consider whether the bark is the object principally to be had in view or the timber. If the former, the season of cutting will fall to be regulated accordingly. But this can never be the case in respect of trees come to any considerable size, which it will be proper to guard against the danger of putrefaction and insect larvæ, even at the risk of the total loss of the bark, though that too may be completely carried, and even with advantage to the timber, by stripping it off in the summer previous to the fall.*

If there were more difficulty than there thus appears to be, in uniting a due regard to the timber of grown trees, with the preservation of their bark, it were of the less consequence, as the bark of old trees is in fact far from being of the most valuable quality. It is to the coppice that we are to look chiefly for this production, by its returns in which, perhaps it is, that the greatest inducements are held out generally to this mode of culture. These are often very considerable; so much so, that, taking into account the further circumstance of their comparative earliness, it is not very wonderful, that there should be a scarcity of

*So far was this from being judged to be the case at one period, that we find a law formerly existing in France, by which the stripping trees of their bark before they were felled was prohibited under a considerable penalty. But Buffon has properly remarked, that the effect of the practice so discountenanced is to improve the quality of timber by giving to the more sappy parts the same hardness and close texture as to the heart. The same advantage may be gained in some degree by disbranching trees the season before felling, which it will be proper to do in any event, previously to their being taken down, with the view of making their fall easier and the danger of injury consequently less, either to themselves or to the adjoining wood. What may be wanted after this, to their complete seasoning, will be quickly effected by their exposure in the usual way to the air.

full-grown oaks. Upon the principle just stated, the season for cutting coppices of this sort, is from the beginning of May till about midsummer. The process of decortication is a very simple one. Three sets of work people are employed; one in cutting down the trees; another in clearing them of brushwood, reducing them into convenient lengths, and carrying them to the barkers, who form the third party, and consist commonly of women and children. Every branch, of an inch diameter, is stripped of its bark. The tools required for this work are a light mallet, and some sharp wedges, all usually of ash. Any larger piece of wood being laid along the ground, is beaten smartly, for some time, over its whole length, with the mallet: when the bark is thus loosened, it is started by thrusting or driving in a wedge at the thick end, and leading it on till it be brought out at the other. The wedge is then applied on each side of the incision, and its effect assisted as formerly, by beating still before its point, till the wood is gradually separated from its exterior covering, by a mode of operation resembling nearly that of flaying an animal. Smaller pieces are, for the greater ease in working, placed on a smooth stone, and, being beaten all round, are quickly brought into the like condition. The principal point to be attended to always is, that the bark be taken off in shreds as long and large as possible, for the convenience both of carrying and of drying.

With a view to the latter purpose, an open and rather elevated situation being pitched upon, pieces of wood are driven into the ground, upon which are rested poles that run parallel, two and two to each other, at the height of about a yard above the surface. Of two poles thus connected together, it may be advantageous that the one should be raised a very little higher than the other, for better throwing off the rain; and different fabrics of this sort may be placed at the distance from each other of about four or five feet. On these is to be disposed the bark, daily, as it is taken off, one row of it being placed above another, to the thickness of about six or eight inches. The grosser and more board-like pieces which occur, may be left standing against the sides of the frames, or put up in small conical piles. The bark ought to be turned once or twice a day, according to the state of the weather, till fit for removal: this will be of beneficial consequence, in respect of the preservation of its natural juices, when the principal agent in drying happens to be wind rather than sun. The bark will suffer nothing from occasional gentle showers during this period; it may indeed even be the better for them; but, from exposure to long-continued rains, there would be reason to apprehend the moist injurious consequences. The chief criterion by which the quality of bark is judged, is the high brown color of its inner rind, with the astringent taste, both of which would be brought into danger in such circumstances. The first thing that suggests itself, by way of preventive, is to turn outwards, and expose to the blast, only the natural surface. The thick bark formerly alluded to, may now also be employed to good purpose, in cover-

ing up and protecting the more valuable parts of the produce. When fair weather returns, the care of drying the whole will proceed as before, till, having been brought into such a state that there is no longer any risk of its fermentation, it is to be housed, or put up into small stacks, carefully thatched, where it may remain till wanted for use.*

Independently of the bark, the wood of the copse, as has been observed, may be turned to good account in various ways. To several purposes it is applicable in its natural state; but its value is much increased in consequence of its suitableness for charring.

In conclusion of the whole subject which has now come under observation, it may be remarked, that those situations must be very unhappily circumstanced, in which the planting and care of woods may not, through some of the channels by which the returns of this mode of industry are conveyed, become adequately productive. It is not unknown, how ungrateful generally to the cultivator is the necessity of a long delay before he can receive the fruit of his labor; yet, if there be tracts of ground, and we know that there are such in this country, which are good almost for nothing in their present state, but which there is reason to believe, might be planted to very considerable advantage; would it be a liberal or even a gainful policy, to withhold the labor or expense necessary for that purpose, from the apprehension of the distance of the profits? Plantations, judiciously managed, may be brought to yield partial returns, even in a few years; and though they should never bring any remuneration to those whose attention formed them at first, and guided them during their early progress, does the present age owe nothing to prosterity? Assuredly it does. And if the generation which now is, shall not make better provision for the succeeding one, at least the earth ought not to be left by the existing generation in a worse condition than they received it, in respect to ornament, shelter, or the means of accommodation, from its greater and more slowly perfected productions.

* The management for other useful barks, differs little from that just described. Thus in regard to the birch and mountain ash, which yield also valuable barks, the only points of distinction are, that the trees are cut down and stripped earlier in the year; and that the outer rind, which would be good for nothing to the tanner, is separated and thrown away during the process of barking.

TREES AS INDUSTRIAL RESOURCES.

A. Kirkwood.

Bass Wood.

Mr. Johnson, United States Consul at Stuttgart, in the Consular Reports for December, 1893, notices the attempts made in Germany to produce a substitute for olive oil, and says that the south Germans have made a table oil from the beech nut which has "given great satisfaction," but the supply is too precarious on account of the scarcity of the nut in certain years. More recently a better and more certain substitute has been found in oil made from the seed of linden trees. According to the report of Dr. C. Müller to the German Botanical Society, this oil "has a number of excellent qualities, which would appear to make it certain that the Linden seed will be considered one of the principal sources for obtaining table oil." The regularity with which the linden produces seed precludes any fear of scarcity; and the percentage of oil in linden seed is given as fifty-eight. It is maintained, Consul Johnson says, that "the oil has a peculiarly fine flavor, free from all bitter or aromatic taste, and that it has the appearance of olive oil. It belongs also to the oils which do not evaporate. Oil made from Linden seed will never become rancid. It has no tendency to oxygenate. It will stand a great degree of cold without freezing. Dr. Muller has exposed it to a temperature of three degrees Fahrenheit below zero without being able to notice any change."

A correspondent of *Garden and Forest*, New York, put this question to the editor, "Do you suppose that the seeds of our native lindens (bass wood) would yield such a percentage of so excellent an oil?" The subject is an interesting one, the editor said, and well worth the attention of our agricultural chemists.

There are several species of the European linden, or lime tree, *Tilia Europæa*. A lime tree in Berkshire, England, known to be more than two hundred years old, has a diameter of twenty-two feet ten inches, at one foot from the ground.

The honey made by bees feeding on the flowers of the European lime tree, is very excellent, and is considered superior to all other kinds for its delicacy of flavor; and the whole flower is deliciously fragrant, especially towards evening

"At dewy eve diffusing odors."

An infusion of the flowers has long held, and deservedly, wide reputation as an antispasmodic medicine. The sap yields a considerable proportion of sugar, and is made, by fermentation, into an agreeable vinous liquor. A substance like chocolate has been made of the ripe fruit, but has the inconvenience of not continuing sweet.* The wood was used by the ancients, according to Pliny, for

*Emerson.

bucklers, on account of its flexibility, lightness and resiliency; and the bark, to cover cottages and form baskets; and the inner bark was employed, under the name of Philyra, to write on, and also as in modern times, as a material for mats. The European lime tree has been long cultivated in this country, and is as perfectly adapted to our climate as our native linden. In medicine its supposed virtues were very great; the leaves and bark had a healing power, and decoctions of various parts beautified the skin and promoted the growth of the hair. The seed was said to be eaten by no animal.

In the middle ages the same honors were paid to the lime tree which belonged to the poplar, a tree which derived its name from being the emblem of popular freedom. During the struggles of the Swiss and Flemish to recover their liberty, it was their custom to plant a lime tree on the field of every battle that they gained over their oppressors. When, too, we recollect that the father of modern botany, Linnæus, derived his name from the Swedish Lin (linden tree), we must allow that it is recommended to us by the most pleasing associations.

The linden tree, or bass wood, *Tilia Americana* rises to a considerable height with an even, erect, or pillar-like trunk, and many branches. When growing free by itself, it often assumes a conical form of striking regularity. In autumn, the leaves turn to a lemon yellow color. The leaf-stalk is half the length of the leaf and smooth. Flower-stalk as long as the leaf, smooth, twice or thrice trichotomous at the end, rising from the upper axil of the leaf, pendulous, attached for half its length, to an oblong, membranous, ribbon-like pale straw-colored bract, as long as itself. The flowers, which are from nine to twenty-seven, are yellowish white and fragrant. The fruit is a woody or bony, pubescent, roundish, gray nut, one-fourth of an inch in diameter, containing one seed. It flowers in July and August, and ripens its fruit in October.

The lime tree, though not applied to so many valuable uses as it was in the time of Pliny is valuable for many purposes. The flowers diffused in hot water make an agreeable kind of tea. The leaves and young shoots are mucilaginous and may be employed in poultices and fomentations. The timber is better adapted than any other for the purposes of the carver, it will take any form whatever; it admits of the greatest sharpness in the minute details, and it is cut with the greatest ease.

The superiority of lime wood for the purposes of sculpture is confirmed by the fact that Gibbon, the celebrated carver in wood preferred it to any other. Walpole calls Gibbon "An original genius, a citizen of nature. There is no instance before him of a man who gave to wood the loose and airy lightness of flowers, and chained together the various productions of the elements, with the free disorder natural to each species." Many fine specimens of Gibbon's carvings still exist in their original beauty at Windsor Castle, St. Paul's Cathedral, and many of the mansions of the nobility.

The wood of the lime tree is of a pale yellow or white, close-grained, soft, light and smooth, and not attacked by insects. Its weight, per cubic foot, when green, fifty-five pounds; half dry, forty-five pounds; and dry, thirty-seven pounds. It is used by pianoforte-makers for sounding boards, and by cabinet-makers and toy-makers for a variety of purposes. It is carved into toys, picture frames, turned into domestic utensils of various kinds, and into small boxes for the apothecaries. This wood is said to make excellent charcoal for gunpowder; even better than alder, and nearly as good as hazel. Baskets and cradles were formerly made from the twigs; and shoe-makers and glovers are said to prefer planks of lime tree for cutting the finer kinds of leather upon. The leaves of the lime tree, in common with those of the elm and the poplar, were used, both in a dried and in a green state for feeding cattle, by the Romans; and they are still collected for the same purpose in Sweden, Norway, Carniola and Switzerland.

But the peculiar use of the lime is for the formation of mats from its inner bark. In June when the leaves begin to develop themselves, and the tree is full of sap, branches or stems of from eight to twenty year's growth, are cut and trimmed and the bark is separated from them from one end to the other. This is easily done by simply drawing the edge of a knife along the whole length of the tree or branch, so as to cut the bark to the soft wood. It then rises on each side of the wound, and almost separates of itself. If mats are to be made immediately, the bark is next beaten with mallets on a block of wood, and children are employed to separate the inner bark, which comes off in strands or ribands, while the outer bark detaches itself in scales. If mats are not to be made for some time, the bark is dried in a barn or shed, and either kept there or stacked till it is wanted. It is then steeped twenty-four hours in water, beaten as before, and put into a heap, where it remains, till it undergoes a slight fermentation. When this has taken place, the inner bark separates in ribands and shreds as before. With the shreds, cords of different kinds are twisted in the usual manner; and mats are formed with the ribands in the same way as rush mats. The ribands which are to be used in forming mats for gardens undergo a sort of bleaching for the purpose of depriving them of part of their mucilage, which would otherwise render them too liable to increase and diminish in bulk by atmospheric changes. The great advantage of lime, or bast mats, over all others in gardens, is that they do not so easily rot from being exposed to moisture.

Ropes are still made from the bark of the tree in Cornwall, and in some parts of Devonshire. The fishermen of Sweden make nets for catching fish of the fibres of the inner bark separated by maceration, so as to form a kind of flax. On the Ohio river, Michaux says it was employed as the material from which the figure-heads for prows of vessels were carved.

The lime bears the smoke of cities better than any other tall-growing forest tree; and for this reason the shaded walks about many cities in Europe, more especially in Germany, are planted with it, and it is not so liable to get unsightly from wounds and decayed branches, as almost any other tree. It is recommended, as preferable to the elm, for sheltering gardens or orchards; because the roots do not, like those of the elm, spread out and impoverish all around them. A deep and rather light soil is recommended, but the largest trees are generally found in a good loamy soil. In dry situations it never attains a large size, and loses its leaves earlier than any other tree. The tree in Britain appears seldom to ripen its seeds.

As an ornamental tree, the linden is to be recommended where the object is to obtain a great mass of foliage and a deep shade. No other native tree surpasses it in the abundance of its foliage. These qualities adapt it admirably for being used as a screen, as a welcome shade for cattle, or as a shelter to protect more tender trees against the wind. It might therefore be planted to supply the place of the native forests, in situations where fruit trees are suffering from being deprived of this protection. Its growth is very rapid, it bears pruning almost to any extent, and may be trained to grow as tall or as low and bushy as may be required.

What Bryant said of another group of trees is true of the linden.

"These shades are still the abodes
Of undissembled gladness; the thick roof
Of green and stirring branches is alive
And musical with birds, that sing and sport
In wantonness of spirit; while below,
The squirrel, with raised paws and form erect,
Chirps merrily. Throngs of insects in the glade
Try their thin wings, and dance in the warm beam
That waked them into life. Even the green trees
Partake the deep contentment as they bend
To the soft winds; the sun from the blue sky
Looks in, and sheds a blessing on the scene;
Scarce less the cleft-born wild-flower seems to enjoy
Existence, than the winged plunderer
That seeks its sweets."

The linden may be propagated by layers, by shoots, or by seed. As plants raised from seed are of comparatively slow growth, the French gardeners, according to Du Hamel, employ the following mode of propagation which may be easily practised in our native forests, where this tree is remarkable for the abundant shoots from the stumps. They cut an old tree close to the ground, which soon sends up a multitude of shoots. "Among these they throw a quantity of soil, which they allow to remain two or three years; after which they find the shoots well rooted, and of a sufficient height and strength to be planted at once where they are finally to remain." This mode is also practised with the elm.

Hunter gives the following directions for forming layers from shoots of the American lime: "When the layering of these is to be performed, which ought to

be in the autumn, the strong two years shoots must be brought down; and if they are stiff and do not bend readily, they must have a gentle splash with the knife near the bottom; a slit should be made at the joint for every one of the youngest twigs, and their ends bent backwards that the slit may be kept open. This being done, the mould must be levelled among the layers, and the ends of them taken off within one eye of the ground. The business is then done; and the autumn following they will have all good roots, many of which will be strong, and fit to plant out for good, whilst the weakest may be removed into the nursery ground, in rows, to gain strength.

Hickory.—Juglandaceæ, Carya.

Useful Nut and Timber Trees.

The hickory is peculiar to America. In many respects it is amongst the most valuable of our trees. It is always a stately and elegant tree; and the several species, and individuals in the same species, exhibit so great a variety of appearance and foliage that they have almost the interest of a forest. Few trees contribute so much to the beauty of the woods in autumn. The colors of all at that season are rich, and each species has its own. The smoothness, closeness and hardness of the grain of the wood give it great value in the arts; and for fuel it holds unquestionably the first place. The fruit of some of the species, even in the unimproved condition of its forest state, vies with the best of foreign nuts, and is destined, doubtless, to be greatly improved by the resources of cultivation. With such claims, Emerson states, it has a right to demand more attention than it has yet received.

The hickories are stately trees. All of them have, more than any other native deciduous tree, a tendency, even when growing by themselves on the open plain, to rise to a great height, and form a tall cylindrical head, not wide, but holding a breadth of twenty or thirty feet, with only such breaks and irregularities as preserve it from sameness, to the very top. This great beauty of the tree would recommend it for transplantation to the sides of commons and public roads, if it were not for the great difficulty with which it is removed after it has attained any height. The principal root, except, perhaps, in the case of the bitternut hickory, is a very long and perpendicular taproot, with few fibres or side roots. It is, therefore, liable to be so much injured in transplanting, from the loss of the extremity, that few trees survive the operation. To be successfully propagated, it must therefore be raised from the seed, sown where the tree is finally to remain. In our bleak and windy climate few trees will grow without shelter in their earlier years. The hickories, whether for high forest or coppice, should be raised in large masses, of several acres at least. And the nuts, previously made

to germinate in boxes filled with earth and kept moist in the cellar,* should be sown so plentifully as to allow for casualties, such as the depredations of squirrels and other small animals, and still remain growing pretty thickly. Their growth at first is slow, but it is more rapid in proportion to the completeness of their protection on every side.

When the young plants have attained the height of from five to eight feet, they may be thinned out for the purpose of making walking sticks, for which the consumption is very considerable, and the demand increasing. When at the height of fifteen or twenty feet, and from two to four inches in diameter, they may be still further thinned for hoops and wheel spokes. The value of the young and growing trees for fuel and other purposes will be a sufficient inducement to continue the operation of thinning to as great a degree as is necessary for coppice, and for the best growth of the larger trees, which may be left standing for timber or for the fruit.

The uses to which hickory wood is put are very numerous. Great numbers of walking sticks are made of it, as for this purpose no other native wood equals it for beauty and strength. It is next in value to white oak for making hoops, of which great quantities are made. The price these bring is such that it is doubtful whether land of a suitable quality can in any other way be made so productive as in raising them. Hickory makes the best screws, the smoothest and most durable handles for chisels, augers, gimlets, axes, and many other common tools. Seasoned wood of some varieties of the pignut and mockernut trees is equal in durability to iron wood or lignum vitæ for mallets and heads of beetles, being tougher and more durable than white oak. The sailor prefers a hickory handspike. Its smoothness and tenacity recommend it for the screws of presses, the rings which confine the sails of small vessels to the mast, and for the cogs of grist-mills. The carriage maker employs it for the springs of gigs, the whiffletrees of stage coaches, and the wheel spokes and shafts of light wagons. The farmer makes of it the teeth of his rakes, bows for his yokes, and handles for his axes; uses it, when white or yellow oak cannot be readily found, for axle-trees, saws it into plank for barn floors, and applies it to many other purposes. For tide mills it is preferable to oak timber, as it is not attacked by worms when in salt water.

As is the case with most other woods, that is most valuable which has grown most rapidly, and which in consequence, has least of the red-heart wood. That of the pignut is heaviest, next in succession the shell-bark and mockernut, in the proportion, when green, of 31.29 and 25.

As fuel, hickory is preferred to every other wood, burning freely even when green, making a pleasant brilliant fire, and throwing out great heat. Charcoal made from it is heavier than that from any other wood, but it is not considered

* Michaux.

more valuable than that of birch or alder. The ashes of the hickories abound in alkali, and are considered better for the purpose of making soap than any other of the native woods, being next to those of the apple tree.

The shell-bark hickory ought to be cultivated for its nuts. These differ exceedingly in different soils and situations, and often on individual trees growing in immediate proximity. There is a common idea, which seems to be well founded that the excellence of the nut is proportioned to the roughness of the bark. An observation of the elder Michaux encourages us to hope that the fruit may be greatly improved by cultivation. The nuts vary very much in hardness and thickness; the best varieties being thinner and softer, and having commonly a rounder and fuller shape, than the poorer sorts. The kernel is very sweet, much superior in quality to that of any other native nut, and, in the best varieties, it is equal to any imported nut. It ripens in October. Every fruit which is much used for food, except this, has been improved by careful cultivation of many centuries. The shell-bark hickory, Emerson says, is a proper subject for experiments, to be made with special reference to the improvement of the nut. Those varieties should be selected which unite, in the greatest degree, thinness of shell with fulness and richness of kernel. If as great a change can be wrought as has been effected in the common European walnut, which, in its wild state, is small and thick-shelled, the fruit of the shagbark will be far superior to any nut now known.*

The wood of the shall-bark hickory splits more easily than that of the other species, and has more elasticity. It is therefore preferred for whip-stalks, goads, and ox-bows; and sometimes it is used for making baskets. It has less strength and tenacity than the wood of the pignut hickory, though it possesses in a high degree these characteristic properties.

As fuel it stands at the head of the list of trees belonging to our climate, or probably to any other. It is the heaviest of our native woods, and yields pound per pound, or cord for cord, more heat than any other, in any shape in which it may be consumed.

The principal descriptions of timber used for carriage wheels of every kind, is elm for naves, hickory and oak for spokes, ash and elm for *felloes*. Spokes are what is generally termed blocked before they are sold, and they are generally blocked out of small hickory and oak trees, for which purpose the hickory and oak timber of natural coppice-wood are remarkably well adapted. As these spokes must not have the heart of the tree in them, they are, after being cross cut to the proper length, cut with a saw, and are most generally made from the cleanest of the wood. The cart-wright and wheel-wright give high prices for every piece of wood, of proper size and sort for their respective purposes, and the

*The fruit of the pecan is considered as one of the best of the hickories, and occasionally a tree is found upon which it is exceptionally fine.

smaller branches which were formerly given away or burnt, may be sold to the manufacturers of dyeing and printing colors who extract from them the liquid pyroligneous acid in considerable quantities, and apply it to various uses. In this process a considerable bulk of tar is also obtained, and the wood is reduced to very fine charcoal.

A method of thickening coppice-woods which has been tried with success, and might be extended with advantage, is by layers. The rods which would be removed in thinning or weeding, are, at any period of their growth, from the second to the sixteenth year, bent down to the ground, secured in a horizontal position by forks, and buried in the ground at proper intervals. In a short time those parts which are in the earth send out new roots, which are speedily followed by the growth of young shoots. The communication with the parent stem may then be cut off; and the new stool thus formed becomes in due time fit for being cut along with the rest of the wood. It is easy to perceive that any hickory wood growing on a proper soil may in this way be brought to its maximum of thickness at no distant period.

No young shoots of any value spring from the stump of a large tree. It has been found that there is no growth from stocks exceeding fourteen inches in diameter; the young shoots spring up with incredible vigor and rapidity, attaining sometimes the height of six or seven feet, and the thickness of half an inch in the first year of their growth. In reserving standard trees, those ought to be selected which are apparantly healthy and vigorous, that they ought to stand on the outskirts, or in vacant parts of the wood, and that particular care ought to be taken, in pruning, not to lop off great branches by which the tree is often irreparably injured, and prevented from ever attaining its full size and value.

Willows and Osiers.

Salicaceæ (*Willow Family*), *Salix*.

Soft-wooded trees or shrubs growing in damp places, with alternate, usually quite elongated, pointed, deciduous leaves without lobes. Of the willow family there have been enumerated about one hundred and forty species and varieties. The willow is a light, graceful and quick-growing tree, and is confined chiefly to the temperate regions of Europe and America. It flourishes on the banks of rivers and lakes, and other moist situations.

> "Where the runnel winds its weedy way,
> And where the willows on its margin grow."

Those kinds which attain a timber size are chiefly valued for the rapidity of their growth, as they produce a great bulk of trunk and lop in a short time; and the bark of most of the species has recently been used in tanning, being, at an average of sorts about half as valuable as that of the oak.

Osiers.

The osier stands first as a coppice wood, whether it be cut annually for the use of the basket-makers or be suffered to stand three, four, five or a greater number of years for the purposes of withs, hurdles, stakes, rake-handles, other implements of husbandry, or poles of almost any length or dimensions. Notwithstanding, the osier is usually planted near water, there is good reason to believe it affects a dry situation; this we know, that it will not flourish in water, that is, when water has a constant communication with its roots. The places it most delights in are drained moors and the banks of large rivers, both of which are dry situations. It has no dislike, however, to being flooded occasionally, but seems rather to be invigorated by such irrigation; therefore the banks which we frequently see thrown up by the sides of rivers, and which sometimes lie for a long time before they become profitable, are peculiarly eligible to be converted into osier grounds. The method of planting an osier ground is this: The soil being laid perfectly dry, and its surface made thoroughly clean, cuttings of the second or third year's growth, and about twelve inches long, are planted in drills about two feet and a half asunder in the month of March or April. The cuttings ought to be thrust seven or eight inches deep, leaving four or five inches of head above ground.

The intervals must be stirred with a small plough or hoe, as the first year a crop of potatoes may be taken. The drills in either case must be kept perfectly clean with the hand-hoe, and at the approach of winter the intervals must be split and the mould thrown to the roots of the young plants in order to lay them dry and warm during the winter.

In spring it will be well to trim off the first year's shoots (though not necessary) and replace the plants which have failed with fresh cuttings. The second summer the intervals must be kept stirred, the drills hoed and the plants earthed up, as before, against winter.

The ensuing spring the stools must again be cleared, although the twigs as yet will be of little value; but the third cutting they will produce marketable ware, and will increase in quantity and value until the profits arising from them will be almost incredible.

The principal errors into which most persons fall who attempt to establish plantations of osier, seem to be the following: Employing improper soil, peat earth perhaps, or poor bog; imperfect or perhaps no preparation of the soil, though proper in other respects; bad or useless sorts planted; too few cuts put into the ground; want of cultivation, particularly during the first spring and summer after planting; allowing the shoots to be cut over after November and before the middle of March, which may be the cause of the stocks being much weakened by hard frost succeeding heavy rains immediately after the twigs have

been cut and before the wounds from the knife are healed up. If it is expected to rear the finest and most valuable twigs the land must be cured of chilling, weeping springs, and if the soil is not of considerable richness, it must be made so with manure. Moderate moisture is favorable to the production of fine twigs, but water continually stagnant may be considered as ruinous, and very destructive in summer by preventing the wood from ripening.

It is also considered necessary to trim and dress the stocks from decayed wood, and to leave only as many buds on each as the plant will bring to good perfection in length and strength of shoot, cutting down the superabundant stumps to the old wood; extirpating the weakest shoots or stumps, and seldom leaving more than two buds or eyes on those made choice of to stand to produce next summer's growth.

This operation should be performed in November, or beginning of April, going regularly over the plantation with a strong, sharp pruning knife, examining every stock with attention and trimming it to the best advantage. All this can be done for a trifling expense if the stocks are trained from the beginning, and regularly trimmed every time the plantation is cut over. Instead of an infinite number of small, weak shoots, the longest probably little above four feet long, as may be observed in plantations where no attention is paid to training and trimming the stocks, or pains taken to keep down weeds and grass by careful and regular hoeing; those who pursue a different and opposite management have the satisfaction of seeing the shoots on their plantations of osiers from four to nine feet long and of the best quality.

The willow grows so incredibly fast that there was a bye-word in Buckinghamshire that the profit by willows will buy their owner a horse before that any other tree will pay for his saddle.

An osier plantation may be made at any time after the fall of the leaf, and an early period in spring. Cuttings fifteen inches long should be taken with the knife on an upward slope from well-ripened wood of either two or three years' growth. They grow more luxuriantly when planted about two-thirds of their length in the ground. They may be put into the ground by means of a dibber, shod with iron, the earth being firmly compressed about them. The shoots may be put into the ground perpendicularly, or, in the case of a mound, as a river bank to be defended, in a slanting direction.

The soil adapted to the willow is one which is more or less aluminous, and so capable of retaining the water which is imbibed by it. The siliceous sands and incoherent gravels are unsuited to the willow, because, although they readily imbibe water, they do not retain and supply it in due quantity to the growing plants. Although the willow requires an adequate supply of water, it is injured by an excess of it, whether upon the surface or under ground, and hence, when the willow is planted in marshy land, the excess of water should be drained

away by open trenches carried through the ground. The willow is not nice in the choice of soils, provided they be capable of preserving themselves sufficiently moist; but, like all trees, it grows most vigorously where the soil is naturally fertile. The best of all situations for the willow are the flat plains of the richer clays, as the alluvial marshes, the deltas, islets and banks of rivers. It will grow in the higher grounds and at a considerable altitude, but such is not the proper situation for the larger willows, which are overturned and broken by the winds.

When willows are cultivated for the larger timber, they should be planted in masses together, without any intermixture with any other trees. They themselves require no shelter, and quickly overtop the species that are mixed with them. When planted thus, they grow uniformly with tall erect stems and become useful timber in a shorter time than any kind of trees. The instances are numerous of groves of willows growing nearly uniform to the height of sixty feet or more, with corresponding trunks, in twenty years. All that is required under this treatment is, that sufficient air shall be admitted, by early cutting down of the supernumerary trees, which will grow again from the stocks, and produce a coppice more useful than any that can be raised in the same time. Planters who have only seen the willow cultivated in high grounds, where it is apt to be uprooted and broken by every storm, or placed in narrow belts, where it never becomes an upright tree, or stuck into some undrained marsh or miserable peat bog, will be suprised to learn that the willow, cultivated as it should be, in masses along with its fellows, and in the situations suited to it, is one of the most profitable forest trees which can be produced in these latitudes.

When willows are cultivated for coppice, they may be planted at the distance of five or six feet each way, and cut down periodically at the age of six, seven or more years, when they will be fit for hoops, rails, ladders, and other country uses. The willow, too, may be grown for pollards, for which it is better suited than any kind of tree.

Pliny says that the Britions used to make voyages in boats of willow. His description of them is thus given by Camden:

> "First, little boats of well soak'd twigs were made,
> A tecking hide above the twigs was laid
> Thus rudely fitted, o're the waves they rode
> And stock'd with passengers outbrav'd the flood.
> Thus rough Venetians pass the lazie Po,
> And British keels the boundless ocean plow."

Julius Caesar relates, in his history of the Civil War that his recollection of the coracles which he had seen during his invasion of Britain, was, on one occasion the means of extricating his army from a critical position; for, being hemmed in by the enemy, and being unable to throw a bridge across a river which impeded his movements, he set his troops to work, and quickly completed enough boats to transport his army.

When willows are cultivated for osiers, they are formed into plantations, with nearly the same care as the hop or vine. The land should be trenched, freed of strange plants, and drained, if necessary, by trenches, at regular distances, like the water-furrows of fields, the earth of the trenches being thrown up to increase the depth of soil. The shoots are planted in rows, at the distance of three feet or less, the plants themselves being at the distance of eighteen inches or more, according to the nature of the soil ; and they are to be kept perfectly clean, by regular hoeing. In the second year they will be fit to be cut down, and to yield afterwards their regular crops of shoots, which are cut every year, so long as the plantation remains in vigor. There is no kind of woodland which yields a larger and steadier return than the osier holt or plantation, when favorably placed, with respect to soil, and the means of disposing of the produce.

The willow chiefly interests us for its economical uses, but Low has remarked that it is not without characters which may gratify the tastes. It has nothing of the gay foliage of the oak, the maple, the ash, the elm and other trees which delight us with their summer verdure. Its pensile boughs and drooping leaves produce rather feelings of a sadness which is not sorrow. It recalls to us the silent river, the sedgy pool, the lonely fountain. Amongst the livelier foliage of the woodland, the pale and drooping willow is out of keeping, and undoes the very charm which art should heighten. Its fitting place is by the brook, the pool, the lake, on the river shore, in the deep dell, where the stream may be imagined to trickle, and the fountain to issue forth. There, emblematic of coolness and moisture, the pensive willow may find the place which taste may choose for it.

Beneath the waving willow's shade,
And the clustering grapes green bowers,
Amyntas tuned his pipe and played —
While Phyllis decked my head with flowers.
—Virg.

So general is the idea of sadness of the willow, that to "wear the willow" has become a familiar proverb. Fuller referring to the willow, says :—"A sad tree, whereof such as have lost their love make their mourning garlands."

Herrick, too, says of the willow :

"When once the lover's rose is dead,
Or laid aside forlorn,
Then willow garlands round the head
Bedew'd with tears are worn."

The wood of the willow is light and shrinks much in drying, but it is tough and elastic. It is employed by coach-makers, and for the lining of wagons used to carry hard substances, as stones ; for the boards of water-wheels, for the wheels of glass-grinders, for the paddles of steamboats, for the keels of ships and for the entire construction of light and small vessels. It is employed for hay-rakes, the handles of different tools, for posts, rails, and for the purposes of the cooper, for hoops, hampers, baskets, crates, and wickerwork of all kinds, for which there is an

incredible demand. It furnishes charcoal, which is greatly valued for the manufacture of the finer kinds of gunpowder, on account of the property it possesses of igniting readily. The bark is used for tanning. In the older trees the bark is as rich in the tannin principle as the oak; but when the trees are felled at the usual age, it is reckoned of about half the value of that of the oak.

Evelyn in his Silva feared that the progress of the iron manufacture would lead to the destruction of all the timber in England in the preparation of charcoal for furnaces. He did not forsee that a substitute would be found by charring pit-coal into coke. In 1788 there were eighty-six iron furnaces in England, of which twenty-six were heated by charcoal of wood: in 1826 there were 305, all served by coke.

The willow is in request for the use of the turner, and for lasts and toys, as a substitute, when dyed, for ebony, and for all purposes for which toughness, pliancy and elasticity are required. The best sorts for timber are the white, the Bedford, the crack willow and the goat's willow. *Salix Caprea*, or goat willow, which bears the yellow blossoms called "palms," possesses many valuable qualities. Bees are particularly fond of this blossom, which is a grateful resource to them after their hybernation, when flowers have scarcely dared to make their appearance.

> The willow hedge, which parts your neighbor's land,
> To bees of hybla yields unfailing store
> Of sweetest nectar, and with constant hum
> Invites repose.—Virg. Ec. 1.

The leaves of the goat's willow are considered in France the best food for cows, goats and horses, being collected in summer and stacked for winter consumption.

The slender branches of the osier are useful for bird cages, springles for fastening down thatch, wheels or traps for catching lobsters and eels, and crates; and the wood furnishes shoemakers with cutting and whetting boards, on which they cut leather and sharpen the edges of their knives. For hampers and baskets the rods are made use of both with and without the bark; in the latter case after being washed in clean water the baskets are placed in a close room, and subjected to the vapor of sulphur which renders the color delicately white. The rods are split into thin lengths for work-baskets and other light articles. The Milicete Indians scrape the bark from the young twigs of the shining or red willow, *Salix lucida*, and when dry mix it with their tobacco for smoking. They are very partial to this admixture, the odor of which is much more agreeable than that of pure tobacco.

The bark of some kinds of willow in combination with alder has been used for striking a deep black color in the dyeing of linen.

The boats used by the early Britons were constructed of willow rods covered with hides, they were called coracles, and it is curious that very similar vessels, called by the Irish *currack*, are in partial use to this day. "Coracles thus made," says Southey, "and differing only in the material with which they are coated, and carrying only a single person are still used upon the Severn and in most of the Welsh rivers. They are so small and light that when a fisherman lands he takes his boat out of the water and bears it home upon his back."

If Osiers are not wanted to be used with the bark on they are tied up in bundles and placed on end in standing water until the following spring. When the buds begin to shoot the rods are ready for peeling and after this process they will keep for a very long time. Willows and all the soft woods when used for poles or other purposes, should be stripped of their bark and steeped in water for some months, which will prevent the worm, and render the wood extremely durable.

The timber of the Bedford willow is said by Loudon to be more valuable than that of any other species. It is in this species also that salicin is most abundant. This substance has attracted much attention from the asserted efficacy in the cure of intermittent fever. It is tonic and astringent, and has been employed as a substitute for Peruvian bark, though the ascription to it of equal efficacy with sulphate of quinia is probably incorrect. The bark may be employed in substance or decoction, in the same dose and with the same mode of preparation as cinchona. The decoction of willow has been found beneficial as an external application to foul and indolent ulcers.

The trees on which the captives of Israel hung their harps belonged, there can be little doubt, to the species which botanists have named *Salix Babylonica*, or weeping willow, which grows on the banks of the Euphrates and in other parts of Asia. The Weeping willow seeks a humble scene, some romantic footpath bridge, which it half conceals, or some glassy pool, over which it hangs its streaming foilage.

> ———And dips
> It's pendent boughs stooping as if to drink.

Few trees have obtained greater celebrity from their locality than that known as Napoleon's willow. Loudon informs us that this tree was introduced into St. Helena from Britain by General Beatson, in 1810. It was planted among other trees on the side of a valley near a spring, and having attracted the notice of Napoleon he had a seat placed under it and used to go and sit there very frequently, and have water brought to him from the adjoining fountain. About the time of Napoleon's death, in 1821, a storm shattered the willow in pieces, and after the interment of the Emperor, Madame Bertrand planted several cuttings from it on the outside of the railing which surrounded the grave. As none of

these flourished they were renewed in 1828, and from one of them, which outstripped the rest, were brought most of the cuttings which have been reared in Britain and other countries.

The White Leaved or Common White Willow, *Salix Alba.*

This is the commonest of all our willows, and one well known to country dwellers, or country ramblers, growing in moist places and turning up as the wind blows its "silver lining to the light." In the north of Europe, the bark of this tree is used for tanning leather and for dyeing yarn of a cinnamon color, and the leaves and young shoots are given to cattle in a green state, or dried like the twigs of the birch and laid up for winter fodder. The inner bark, like that of Scotch pine, being kiln-dried and ground into a fine flour is mixed with oatmeal and made into bread in seasons of great scarcity by the inhabitants of Norway and Kamtschatka. The branches of the tree are used as stakes, poles, handles to rakes, hoes and other implements, and as faggot-wood for fuel. The timber of the trunk is used for various purposes. It weighs in a green state seventy pounds nine ounces per cubic foot; half dry, fifty-one pounds fourteen ounces, and quite dry, thirty-two pounds twelve ounces, so as to lose more than one-half by drying, during which it loses a sixteenth part of its bulk. It is found an excellent lining for stone carts, barrows, etc. It is used in turnery, millwork, coopery, weatherboarding, etc., and the stronger shoots and poles serve for making hoops, handles to hay rakes, clothes props and various other instruments and implements, and the twigs are employed in wicker work. The bark, which is thick and full of cracks, is in nearly as great repute for tanning as that of the oak, and it is also used in medicine in the cure of ague, though it is inferior for both purposes to that of S. *Russelliana*. As fuel the wood of this tree is to that of the beech as 808 to 1,549, but the old bark makes a very useful fuel, and both it and the wood will burn when green, in which state the wood is said to give out most heat. The charcoal is excellent for use in the manufacture of gunpowder and for crayons. The ashes are very rich in alkali, containing more than a tenth part of their weight of that salt. In France a fine blood-red color is obtained from the bark, and that of the young tree is used in the preparation of leather for making gloves. If planted in the grove manner in tolerably good soil perhaps no other plantation, except spruce and tamarac, would give so quick a return for the trouble and expense of planting.

The best kinds of willow for growing as timber trees are: S. *Alba* which will attain the height of from sixty to eighty feet in twenty years. S. *Russelliana*, S. *Fragilis* and S. *Caprea*. The best sorts for coppice wood are S. *Caprea* and its allied kinds. Almost all the species of willows may be grown for basket rods, but some are greatly preferable to others. The most vigorous-growing basket willow is unquestionably S. *Viminalis*, and it is also the sort most generally cultivated for that purpose. It has no disadvantage except that in cold wet

seasons and in a moist soil it does not always ripen the points of its shoots. S. *Forbyana* is an excellent species of less vigorous growth than S. *Viminalis*, and ripens its shoots perfectly in most seasons. S. *Helix*, S. *Vitellina* and S. *Purpurea* are very desirable species where small tough rods are required.

The leaves of the willows are devoured by the large black caterpillars of the Antiopa butterfly (Venessa Antiopa, Harris' Report), and the branches are sometimes completely stripped. The caterpillar of the fork-tail moth (*Cerura* borealis, ib.) is also found on their leaves. A species of plant lice called by Dr. Harris the plant louse of willow groves (*Aphis Salicti*, ib.) is found clustered together in great numbers on the under side of the branches of various kinds of willow and drawing their subsistence from the plant on which they live. The grubs of the horn bug (*Lucanus Capreolus*, ib.) live in the trunks and roots of old willows as well as in those of apple trees and oaks.

STREET PLANTING.

The planting of shade trees along the streets of our cities, towns and villages, other than the main business thoroughfares, is now very general throughout Ontario. The example of progressive citizens in beautifying the surroundings of their homes has been followed by many who might not otherwise have interested themselves in the matter. As the results of successful planting have presented, in the contrast between well-shaded and treeless neighborhoods, more powerful arguments than any theoretical considerations, a strong public opinion has been developed in favor of street planting. Gratifying as it is to note the steady improvement in the appearance of our urban centers since the practice became general it is nevertheless obvious that with the best intentions there has been much misdirected effort which has accomplished little, much disappointment from total failures and results which fall very considerably short of what might have been attained with more system and forethought.

The principal drawback to the success of street planting is the same that has retarded other undertakings in the direction of sylviculture, viz., want of knowledge as to the conditions of successful growth, and the absence of the care and attention subsequent to planting by which alone can the numerous obstacles presented by naturally unfavorable surroundings be overcome. It is safe to say that most people, until enlightened by experience, regard planting a tree as being as simple and easy a matter as cutting one down, all that has to be done is to dig a hole, put in your tree and fill up the hole again. The tree had its roots in the ground before transplanting, it has got them equally well covered in its new location and what more is necessary? The planting is done and if all or a large majority of the trees set out with no more care or thought than is involved in the mere embedding of the roots in soil, die in the course of a few months, why that simply proves that trees are apt to die when transplanted and furnishes to many minds an argument as to the unprofitableness of sylviculture.

If under ordinary conditions of growth a vast deal more is requisite to successful planting than sticking the tree into the ground right end up and letting it take its chances, it is apparent that when the influences and surroundings of crowded thoroughfares upon its growth have to be taken into account the need of attention and proper precautions both at and subsequent to planting must be even more urgent. Yet how often does failure result from the fact that trees are merely stuck in and left exposed not only to the struggle against unfavorable conditions of soil and moisture but to the thousand and one chances of street accidents. In planting in the streets of a town it is of the first importance that the tree has abundance of

GOOD RICH EARTH

about its roots from which to draw nutriment, as the soil of the street is usually hard and dry and largely composed of elements little fitted for the support of vegetable life, such as the debris of building material and broken stone, sand, gravel or ashes. When the tree has attained a firm foothold it will be able to extend its roots into such unpromising and little nutritive soil, but in planting it should have sufficient good, rich soil to give it the needful hold and sustenance. In place of depending upon the earth removed from the holes dug for planting, an abundance of light earth enriched with compost or, if practicable, forest soil should be used for filling in around the roots. If stable manure is used at all it should be well rotted and thoroughly mixed with the earth. Fresh manure if brought in contact with the roots is apt to prove injurious. It might be supposed that ordinary common sense would teach any one that a young tree planted in the usual hardened and arid surface soil of the street would have scant chances of survival, but observation in some localities at least will show that this mistake is not infrequently the cause of failure.

THE CONDITION OF THE ROOTS.

is another matter which ought to receive more attention than it generally does. There are probably few people, except those who have made sylviculture, or some kindred subject a study, who understand that it is through the small hair-like fibres which radiate from the large roots that the tree absorbs nutriment from the ground. In digging up trees for transplanting a large proportion of these are necessarily detached, especially those at the extremities. But most people will be apt to regard the loss of these root-fibres as a matter of little consequence so long as sufficient of the main roots remain intact to secure the tree in its place. Trees are frequently planted from the roots of which nearly all the fine fibrous growth has been torn or stripped away. The larger the trees are, the fewer of these hair-like filaments are likely to be saved in removing them, as they grow in the greatest profusion furthest from the tree and the larger roots. This is one reason why the difficulty of safely transplanting trees increases with their size. When a tree has been dug up for replanting and allowed to remain for some time exposed to the air—possibly also to the sun or a drying wind the fibrous roots get dry very quickly and lose their vitality. Probably no cause results in more failures than the planting of trees which, to the inexperienced eye, have plenty of roots, but from which the fine fibres have been either torn away or allowed to wither through too long exposure to the atmosphere. In connection with the important function performed by the root filaments it must be remembered that the moisture which they absorb is largely given out through the foliage. When the capacity of a tree for extracting moisture from the earth is greatly diminished by the loss of a considerable

proportion of its roots, as is nearly always the case in transplanting, it is necessary to preserve the equilibrium between absorption and evaporation by proportionately diminishing the expanse of foliage by pruning. Otherwise the amount of moisture which the small remaining quantity of root-fibre is able to absorb will be insufficient for the supply of the leaf surface, and the result will be a decreased vitality followed by the death of the further extremities of the branches and possibly of the whole tree. But it is necessary likewise to guard against the other extreme of excessive pruning, which is often resorted to, reducing the tree to a mere pole, which will require several years to produce an appreciable crown of foliage. By retaining as far as possible the masses of fine roots the need of pruning will be greatly lessened.

The absolute necessity of a sufficient depth and area of rich, light soil, combined with good roots, to successful transplantation is further emphasized in the case of large cities where modern sidewalks and road-beds are adopted. The trees on such thoroughfares are confined to a narrow strip of boulevard a few feet in width, flanked by stone curbing and beds of asphalt, blockpaving, stone or concrete, as the case may be, impervious to water. The only area from which their roots, which have probably been badly mutilated in the process of street improvement, can draw moisture, is the limited space of the intervening boulevard. The surface drainage takes off all water almost as rapidly as it falls, leaving but little to be absorbed by the usually hard and well-nigh impervious surface. Under such circumstances the persistent vitality exhibited by many trees which appear to thrive under so many discouragements is a greater cause for surprise than the frequent deaths. It must be noted, however, that these trees have usually been well-grown before the adoption of modern street paving systems, and it may reasonably be questioned whether it will be possible to replace them successfully with young trees when decay compels their removal. In Paris and other old world cities, where these conditions are intensified, the boulevard trees, which add so greatly to the charm of outdoor life in the gay capital, are planted in large pots, otherwise they could not flourish. With the increased adoption of impervious pavements and underground system of piping for various purposes, the difficulties of successful tree-growing in urban streets will be considerably increased, and it will be necessary to adopt some artificial method for providing them with moisture.

Tree Guards.

There is very little use in planting trees along the streets, no matter what care is observed, unless they are protected from the injuries to which in such localities they are continually liable. This is so obvious that there is little need to dwell upon the point. As a rule the tree guards in this Province consist of a more or less open wooden framework sufficiently high to protect the tree against ordinary accidents in the course of street traffic and the attacks of animals and

thoughtless or mischievous boys—the latter being by no means the least of the dangers to which street trees are exposed. Wire netting which has come largely into use in American cities is recommended as more effective. It was first used in Washington, and a writer in *Garden and Forest* thus refers to it; "How complete this protection is can be plainly seen by one who rides through certain streets in Washington where the trees were originally planted twice as close as they should have been. Since every other tree is to be removed when it begins to interfere with its neighbors, these guards have only been placed on the trees that are to remain, and in a recent examination of a row of trees a mile long and treated in this way there was hardly a visible defacement on a single trunk which had been surrounded by the wire screen, although the meshes were two inches in diameter, while the unprotected trees were almost invariably badly injured, and some of them completely barked on the street side from the ground to a point as high as a horse's teeth could reach."

Pruning.

Much injury is inflicted upon street trees by ignorant and careless pruning. Limbs are often cut off leaving a projecting stub several inches in length instead of being severed close to the trunk, with the result that the projection gradually rots away and the decay is communicated to the heart of the tree. Want of close pruning is a frequent reason why many apparently fine trees when they should be in their prime are hollow and rapidly decaying. After a tree has been pruned the raw wounds left by the saw or knife should be carefully painted over, a precaution against disease which is but seldom adopted. This process preserves the vitality of the tree and prevents injurious fungus growths upon the scars.

Municipal Planting.

In all large towns and cities the planting of the streets and the due care and preservation of the trees should be undertaken by the municipality in place of being left, as is generally the case at present, in the hands of private individuals. The work should be in charge of some man having a scientific and practical knowledge of the subject, instead of being as it usually is, partly a matter of private initiative and partly under the regulation of civic officials, whose control of trees is merely incidental to their general work. This would not only secure proper planting and due care of the trees, but would be a move in the direction of economy. Each city or town could maintain its own nursery and secure the young trees much more cheaply than they can ordinarily be purchased. Under the direction of a competent city official trees would be planted at the most appropriate seasons and desirable stages of growth with much better results than under the hap-hazard methods usually followed by well-meaning citizens who know but little of the principles of sylviculture. The main advantage, however, would be the uniformity in plan and arrangement which could then be secured.

Artistic Effect.

If a definite system were pursued residential streets would not merely be better planted and the trees more carefully looked after, but there would be some uniformity of design—some eye to general artistic effect. As it is now individual taste or caprice are supreme, and trees are planted or not planted, as the case may be, in irregular fashion. On the same street, for instance, may be seen here a row of maples, there a few horse-chestnuts, further on a wide gap without trees, then poplars or elms, and so on, in various stages of growth and at irregular distances apart. This produces much the same effect as the juxtaposition in the business streets, of modern six and eight-storey buildings with the old-fashioned structures of two and three storeys. It would be a great improvement to have rows of maple on one street, elm on another, etc., set at regular intervals. There is no more pleasing effect in street tree-culture than a long shady avenue of the same variety of trees, trimmed or trained with a view to uniformity, and any intrusion of another kind noticeably differing in hue or foliage is like the discordant and jarring note in a strain of music.

Varieties of Trees.

As to the preferable varieties for street planting there is wide difference of opinion, and a choice depends largely on local conditions. Generally speaking, the popular preference for the maple and elm has much to commend it. The horse-chestnut as compared with these is a tree of comparatively slow growth, though, as it forms a heavy and extended leaf canopy at an early stage of its development, this is perhaps hardly as serious an objection to it as the litter caused by its foliage in the fall. The downy seed-vessels of the silver poplar are an equally strong drawback to the use of this otherwise suitable tree, and the wide-spreading roots of the Lombardy poplar are in some neighborhoods detrimental. The white oak is highly recommended as a street tree, though like all of the oak species it grows slowly, which perhaps is the main reason why it is so seldom planted, as its spreading branches present a splendid appearance when allowed sufficient room to develop to advantage. In fact, as regards street trees generally, the neglect of systematic thinning so as to allow adequate space to each tree as it matures, is responsible for many unsightly growths. Close planting is always advisable, as even with the best management a considerable percentage of city trees are likely to succumb to accidental injuries or unfavorable conditions. But when trees originally set out a few feet apart survive these risks and attain a considerable size, they interfere with each other's growth and require judicious thinning. Private owners are apt to neglect this work which, moreover, should be done with an eye to the general effect under some competent control. While the disposition on the part of property owners to beautify the streets by planting trees has greatly improved the aspect of our cities and towns, the great need, in the larger centres at least, is systematic organization and direction of the work on a general plan.

GALL PRODUCING INSECTS INFESTING CANADIAN OAKS.

W. Brodie.

Biorhiza forticornis, Walsh. on Quercus alba, L. Fig. 1.

This insect attacks the young shoots, branches and roots of our native white oaks, more especially young trees growing in open exposed situations. The galls

Fig. 1.—(⅝ natural size.)
Twig galls of *Biorhiza forticornis.*

are rarely found on branches over ten feet from the ground and more rarely on full grown forest trees, in fact the peculiar habits of the insects restrict them to comparatively young trees.

The galls appear in June, as small pustules of a greyish green color on the bark of recent twigs, in about two weeks they attain their full growth, about the size of red currants, but coarsely wrinkled, varying very much in shape and size, crowded closely together and usually surrounding the twig to a considerable length. Occasionally on vigorous shoots a length of eighteen inches is tightly packed with galls. When mature, towards September, they become of a reddish brown color.

The producers of these galls, *Biorhiza fortiornis*, emerge late in the fall, they are black, wingless, feeble-looking insects, all fertile females, about 3 m.m. long, having some resemblance to ants, but a much shorter connection between the thorax and abdomen. On emerging they crawl about for an hour to two and then burrow in the ground finding white oak rootlets a few inches under ground on which they ovaposit and on which are formed subterranean galls.

The producers of these underground root galls emerge in June, they are provided with ample wings, are sexual, males and females about equally numerous After pairing the females select the young and thrifty oak twigs on which to ovaposit, and the result is the inflated twig galls already described. In this as in all species of the genus *Biorhiza*, as well as in the related genus *Aciaspis*, the alternate broods differ very much in appearance, the brood from twig galls, apterous and asexual, the brood from root galls, winged and sexual.

There are four occupants of these galls besides the producer, one an inquiline *Ceroptres ficus*, Fitch, doing nothing towards forming the gall, but feeding on its substance, and there are three parasitic species, *Ormyrus biorhizæ*, Ashm, *Megastigmus canadensis*, Ashm, and *Diomorus biorhizæ*, Ashm. These were identified for me by Mr. W H. Ashmead, now of the Agricultural Department Washington, many years ago.

This insect pest is more or less common throughout Ontario wherever there are young white oak trees. It was very common in the County of York in the summer of 1882. A large collection of the twig galls was made December 16th 1882, the producers had all emerged, the inquilines and parasites emerged early in June, 1883.

A large collection, a two bushel bag full, was made in the Townships of York and Scarboro', on December 12th, 1886, from this lot producers emerged, December, 12th, 1886—December 21st, 1886. Of this lot 800 specimens were carefully examined, all were females, a few survived until January 29th, 1887, but none survived until spring.

A large parcel of these galls was collected by Mr. W. A. Ducker, D.L.S., August, 29th, 1887, "one hundred miles west of Winnipeg and south of the C. P. R. main line, on scrub white oak." The galls differed from Ontario specimens, in being larger, in being clustered in larger masses and in being of a brownish crimson color. The parcel came into my hands September 19th, 1887, and the producers began to emerge November, 27th, 1887, about two weeks earlier

than Ontario specimens. These producers were unmistakeably *Biorhiza forticornis*, perfectly similar to Ontario specimens, but to remove all doubt I sent specimens to Prof. Riley, who agreed to my identification.

A large collection which was made September 21st, 1887—October 23rd, 1887, from several localities, north, west and east of Toronto, gave out producers, November 29th, 1887—December 18th, 1887, inquilines and parasites, April 29th, 1888—June 9th, 1888.

A collection of the root galls made May 24th, 1887, gave out producers, the winged form, June 5th, 1887. I have not as yet found either inquilines or parasites in root galls.

Of the two forms the root gall appears to be the most injurious, but both are very much so to young trees, for when once attacked, if they are not quite killed out, their strength is very much depleted and their growth retarded and, if it were not for the parasites which prey on *Biorhiza forticornis*, it would not be easy to raise white oak unless artificial methods of destroying the pest were resorted to.

However, there are few on the long list of our injurious insects more easily exterminated than *Biorhiza forticornis*. The twig galls should be collected by cutting the twig below the galls in September or October, before the producers emerge, and keeping them in tight bags during the winter, which will effectually destroy the apterous fall brood. Then in the spring, April or May, open the bags and scatter the galls amongst the infected oaks, thus giving the parasites a numerical advantage which will be an efficient check to the producers for many years.

Holcapsis Globulus. *Fitch.* Fig. 2.

These galls are very common on white oak trees of all sizes, from the young shoot of two years growth to full grown forest trees. The producer has a wide geographical range in North America and is found in Ontario wherever white oak trees grow. The galls are spherical, usually very symmetrical, and when mature of a light brown color. Out of a lot of several hundred galls 20 of the largest averaged 13 m. m. in diameter, 20 of the smallest 5 m. m. diameter, and the average for the lot was slightly over 8 m. m. diameter. The largest gall I ever found measured 15 m. m. diameter, and I have not yet found a gall less than 5 m. m. diameter containing a living occupant.

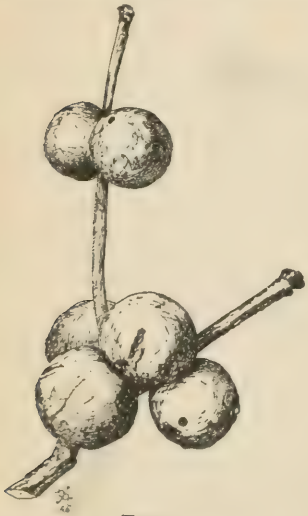

Fig 2.
(Natural size.)
Galls of *Holcapsis globulus.*

The interior of the gall is hard and woody, and at the centre there is a small cell which contains the larva of the producer. The galls are often found singly on the oak twigs, but usually in whorl-like masses of from two to ten.

The producers pupate within the galls and when mature gnaw themselves out, emerging through the

month of October; they are all fertile females. I have bred over a thousand specimens without finding a male. Before the fall frosts come, these females ovaposit in buds, the bud is firmly grasped by the feet, the ovipositor inserted between the scales, and one or two, rarely more than two, eggs are deposited. When the buds begin to expand the following spring, the eggs give out larvæ which form inflated leaf galls which are mature about the end of May; the brood from these leaf galls are sexual, males and females about equally numerous, and the fertilized females ovaposit on the oak twigs early in June, producing the described *H. globulus* gall.

The twig above the gall is invariably killed, and as well as this injury the production of a bushel or two of galls will considerably deplete even a large forest tree; the vernal leaf galls also divert a considerable quantity of plant nutriment as well as deforming and sometimes quite destroying the leaves. I have bred four species of parasite and one species of inquiline from these galls, all of which emerge in early summer. A collection of about 500 galls was made from several localities in the County of York in the autumn of 1893. These gave out producers; *H. globulus* from October 17-November 1, 1893, and parasites and inquilines from June 13, 1894-July 31, 1894.

On account of both the twig and leaf galls being found on the tops of large forest trees and also on account of the great difficulty of seeing them when on small trees, the twig galls being hidden by the leaves and the leaf galls of the same color as the leaves, anything in the way of handpicking or any of the common insecticide methods are not at all applicable. No doubt a careful study of the life history and habits of the several species of parasites would disclose some plan by which the pest could be greatly lessened.

Fig. 3.
(natural size.)
Gall of *Neuroterus batatus*

NEUTROTERUS BATATUS. *Fitch.* FIG. 3.

This is one of the most common of the white oak twig galls, more especially on young and thrifty trees. In Ontario it is found from the shore of Lake Erie to the northern limit of the white oak. The galls appear as swellings, usually to three or four times the diameter of the normal twig, often much more. They are very unsymmetrical being usually bent, twisted, curled into very grotesque shapes. They are hard and woody and covered with normal bark which retains its natural color through the winter. When

there is so much variation measurements fail to give a very definite idea, but it may be said the galls range from 1 to 7 inches in length and from ½ inch to 1¼ inches in diameter.

In the two last described galls of *H. Globulus* and *B. forticornis,* there is but one cell, one producer in each gall, but in the gall of *N. batatus* the number of cells ranges from one to 116, galls with less than five cells or with more than seventy-five are not common.

The producer, *N. batatus,* is about one-twelfth inch in length, black, and provided with ample wings. There is but one form of gall and but one sexual form, but the females greatly outnumber the males.

I have made annual collections of these galls from 1885 to 1892 from many localities in the counties of York and Ontario, and it appears the galls mature in autumn and many producers emerge late in the fall, but whether they ever ovaposit in the fall or not I have not been able to determine, but I have succeeded in keeping them through the winter. But the greatest number remain in the galls through the winter and emerge in spring from May 1 to May 15, and during this period I have found the females ovapositing on the oak twigs.

The parasites and inquilines emerge later, from June 1 to June 18, and I have found parasites ovapositing as late as June 30, when the galls were nearly half grown.

This difference of time in emergence between the producers and parasites, affords an opportunity of artificial interference in checking the continuation of this injury to our oaks. Immediately after the fall of the leaves the galls are easily seen and collected. They should be kept in a closed vessel until the producers have emerged and are of course destroyed, when the galls should be thrown out and scattered among the infected oaks, thus giving the parasites an advantage which they may be able to retain for many years, and thus keeping the injury at a minimum.

THE ALGONQUIN NATIONAL PARK OF ONTARIO.

By Thos. W. Gibson, Secretary for Parks.

If a premature posterity could rise up and enter into account with the present generation, and demand a reason for the burdens we are laying upon it, and the injury we are in many ways doing it, consciously or unconsciously, it is to be feared a sufficient answer would be wanting. "What has posterity done for us?" is a good enough phrase for the sarcastic politician, or the civic financier who issues half a million dollars worth of debentures, payable in forty years, to defray the cost of wooden sidewalks or block pavements, which will be resolved into their original elements long before the debt matures, but the principle is not one upon which a lover of his country or his race ought to base his actions. It would perhaps not be difficult to point out some respects in which we, as citizens of the Province of Ontario, or the Dominion at large, are diligently engaged in sowing the wind, from which, in the natural course of events, those who are to come after us will reap the whirlwind.

But it is pleasant to be able to say that the account with posterity has its credits as well as its debits. One important action the Province has recently taken for which coming generations will surely call us blessed. While it still lay within our power, we have set apart over a million acres of the public domain, and dedicated it to the use and enjoyment not only of ourselves but of the future inhabitants of Ontario, when they shall be counted by the many millions. In the language of the Act of the Legislature establishing the Algonquin National Park (56 Vic., cap. 8), the area appropriated is "reserved and set apart as a public park and forest reservation, fish and game preserve, health resort and pleasure ground, for the benefit, advantage and enjoyment of the people of the Province," which of course includes the generations to come as well as those now in existence, for though individuals die the people never does. It is one of the characteristics of modern times that as the struggle in trade, commerce and all departments of life becomes keener, as competition becomes more intense, the more widely spread becomes the desire to take a respite, brief though it may be, from the care and worry of business, and to seek recreation and restoration in a closer approach to nature than can be found in busy street or crowded mart. There are few indications that life in the twentieth century or succeeding ages will be less arduous than now, and we may well assume that the need for periodical recuperation, so widely felt at present, will be more and more recognized in time to come. Here, then, by Act of the Legislature, an immense tract of land and water, almost equal in extent to the largest county in the Province, is given over for all time to come for just such purposes as will be most appreciated by the tired workers of this and succeeding ages. Nor will its benefits be confined to those who can pass a

portion of their time within its borders. The miller, the manufacturer, the lumberman, and the farmer of the future, will share with the public at large the advantages which will flow from the patriotic action of the Legislature.

The map shows the townships of Finlayson, McCraney, Butt, Paxton and Ballantyne on the west, of which the eastern halves, and the township of Boyd, on the north, of which the southern half, are now included in the Park.

Origin of the Scheme.

The idea of setting apart a forest reservation in the uplands of Central Ontario, which would include and protect the headwaters of the Muskoka, Madawaska, Petawawa and other streams, occurred a number of years ago to Mr.

Alexander Kirkwood of the Department of Crown Lands, who, in a letter dated 21st December 1885 addressed to Hon. T. B. Pardee, then Commissioner of Crown Lands, pointed out the many advantages to be gained by such a reservation. The late Mr. R. W. Phipps also alluded in his Forestry Report, printed in 1885, to the same subject, and recommended a larger area than that suggested by Mr. Kirkwood. Mr. Pardee was very favorably impressed with the project, and commissioned Mr. James Dickson, Provincial Land Surveyor of Fenelon Falls, to examine the district and report upon its suitability for the purpose proposed. Mr. Dickson made his report in January 1888, and spoke highly of the fitness of the territory for a public Park. Mr. Pardee's regretted illness, which ended in his death in July 1889, prevented further progress with the scheme, until Hon. A. S. Hardy succeeded him in the administration of the Department of Crown Lands. That gentleman at once recognized the importance of the undertaking and the advisability of setting about it while the conditions were favorable, and accordingly in February 1892 the government, upon his recommendation, appointed a commission "to inquire into, and to make full report respecting, the fitness of certain territory in our said Province, including the headwaters of the rivers Amable du Fond, Petawawa, Bonnechere, Madawaska and Muskoka, having their sources in the plateau or height of land region lying between the Mattawa and Georgian Bay, with boundaries to be hereafter determined, for the purpose of a Forest Reservation and National Park." The commissioners were: Aubrey White, Assistant Commissioner of Crown Lands; Archibald Blue, Director of Mines; Alexander Kirkwood, Senior Officer of the Lands branch of the Department of Crown Lands; James Dickson, Inspector of Surveys, and Robert William Phipps, Clerk of Forestry. Mr. Kirkwood, in recognition of his untiring efforts in behalf of the scheme, was elected chairman. The report of the Commissioners was laid before the Legislature in the session of 1893. The territory recommended by them for a Forest Reservation and National Park, and afterwards set apart as such by the Act, was a compact tract of land in the District of Nipissing, south of the Mattawa River, and lying between the Ottawa River and Georgian Bay, almost a parallelogram in shape, and consisting of eighteen townships. The names of these townships are as follows: Peck, Hunter, Devine, Biggar, Wilkes, Canisbay, McLaughlin, Bishop, Osler, Pentland, Sproule, Bower, Freswick, Lister, Preston, Dickson, Anglin and Deacon—a list of appellations highly suggestive of the short process by which the Department of Crown Lands confers immortality upon members of the Legislature and others who might otherwise go down into the oblivion common to the mass of mankind. In October 1894 the eastern halves of the townships of Finlayson, McCraney, Butt, Paxton and Ballantyne, lying to the west of the Park, and the southern half of the township of Boyd, on the northern boundary, were added to the Park domain. The total area of the Park is now 1,109,383 acres, or approximately so, for the townships of Sproule

and Preston have never been sub-divided into lots. This is equal to 1,733 square miles, the tract being about forty-four miles in length from north to south, and forty miles in width from east to west. Rather more than one-tenth of the area is water.

A Solitary and Secluded Wilderness.

Until very recently this tract occupied a unique position. Cowper could have gratified his wish for "a lodge in some vast wilderness, some boundless contiguity of shade," by erecting a log hut here, without the least apprehension of being troubled by "rumors of oppression and deceit, of unsuccessful or successful war," or, indeed, any other kind of rumors, so remote for the most part was it from civilization and the haunts of men. No railway penetrated it, or even approached its borders; no travelled highway passed through, or even led to it, exception being made of two or three lumbermen's roads for transport of supplies in winter; there was not, and is not yet, a cross-roads hamlet within its boundaries; not a post office, church, or schoolhouse; even the ubiquitous squatter, who plants himself on every coign of vantage on the ungranted lands of the Crown, has found this district too distant from markets and supplies, and is represented by but one or two of the hardiest of his kind. Here is one of the largest tracts of untouched forest now left within the limits of Ontario—untouched, that is, for settlement purposes: for even here the lumberman has been long at work.

Now, however, the Ottawa, Arnprior and Parry Sound railway, which for some years has been in course of construction, has reached Algonquin Park, and crossed its southern boundary for several miles. The section of the line lying within the Park is the only one now lacking to connect Ottawa and Parry Sound, the western portion having been completed some time ago. Work on the Park section is actually going on, and it is expected that trains will be running on regular time before the end of the present year. There will be several stations inside the Park lines, one at Canoe Lake, where Messrs. Gilmour & Co., of Trenton, owners of extensive timber limits in the neighborhood, are at the present time erecting a large sawmill for the production of lumber. The railway crosses only the southwestern corner of the Park, and leaves the greater part of it in its primeval condition.

It will probably surprise many of our busy city men to learn that within one hundred and fifty miles of Toronto, as the crow flies, there lies this vast, solitary, aromatic wilderness, which is yet almost as little known or frequented as if it were in Labrador, or on the Hudson Bay slope. Yet older Ontario is nowhere at great distance. The Canadian Pacific Railway carries travellers and freight past it on the east and north, and the Grand Trunk Railway on the west, while the newer Ontario, rising in the mineral districts of the Sudbury region,

and yet to rise on the fertile shores of Lake Temiscaming, is the very outpost of advancing settlement as compared with the territory included in Algonquin Park. The current of civilization has flowed up the Ottawa valley, and northward through Muskoka and Parry Sound tracts, leaving the million acres of the Park, and many square miles of contiguous territory, as an island in the stream—a barren island, perhaps, and uninviting to the tiller of the soil, but yet rich in varied store of timber, and great with possibilities of usefulness as the playground, sanitarium, and forest school for future Ontario.

Timber Conditions in the Park.

The whole district is now under timber license from the Government. The pine upon some portions of it was sold at the great timber sale of 1892, but by far the larger area has been in the hands of the lumbermen for many years. In fact, pine has been cut on some of the territory for nearly half a century, and on other portions from a period long previous to Confederation. There are considerable areas, however, absolutely in their original condition, and notwithstanding the encroachments of the lumber trade and the ravages of fire, the shantyman's axe will find ample scope for many years to come in the pineries of Algonquin Park. It would at first sight seem that this removal of the pine would defeat the very object for which the Park was established, and it is doubtless true that if the pine could be left standing the beauty and charm of the forest would be much enhanced. But the pine had been disposed of; to prevent the owners from taking away their property would have been confiscation, and if the establishment of the Park had depended upon the preservation of the pine, the scheme would have had to be abandoned. The cutting will be gradual, and the extirpation of the pine now growing will by no means involve the destruction of the whole forest. A great many other varieties of trees grow and flourish in the Park, and as the felling of all timber but pine is forbidden by the Park Act, the removal of the latter, except where it grows in groves or "pineries," will scarcely affect the wooded condition of the Park, taken as a whole. As a game preserve, water reservoir, and summer resort, the Park will not be materially depreciated by the cutting of the pine timber. The conifers which flourish in the Park are the white and red pine (the former largely predominating), hemlock, spruce, balsam and cedar. Of the cedar found within the Park that in the most westerly townships is represented as being small and of comparatively little value, but that bordering on the Madawaska and Petawawa waters is much larger and of better quality. The deciduous trees are well represented. The place of honor is occupied by the black birch, which grows to magnificent proportions, and is usually of perfect soundness. The wood of this tree is used to some extent in furniture-making, but little or none has ever been taken from the area included in the Park, the reason being that like the maple and other hardwoods, it is too

heavy to be floated down stream to market. The maple, without which no woodland scene would be typically Canadian, is also very plentiful throughout the district and attains to great size and beauty. The beech occurs more sparingly, but is by no means rare; ironwood is common, and black ash mingles with the smaller conifers in marshy places. Alders line the borders of streams, and in many places there is a dense undergrowth of balsam, hazel and ground hemlock.

Large tracts have been burned over, in which all the original timber has been destroyed. These are called brulés, and in such places the original pine forest is succeeded by a crop of the quick-growing and less valuable trees, principally poplar, white birch and cherry, whose seeds are borne thither by the wind, or deposited by birds. Among these, young pines are also found. A white pine forest is slow to reproduce itself, especially on burned-over areas where the fire has been severe, and the varieties which pre-empt the ground after the pine are unfortunately of little or no commercial importance. Experience in other parts of the Province, however, seems to show that if such tracts are not again overrun by fire, the young pine trees eventually succeed in making substantial growth, and are even aided in the early stages of their career by the shelter afforded them by their less valuable neighbors. Should a second or third fire sweep over a brulé, as sometimes happens, all remaining seed pine-trees are almost sure to be destroyed, as well as any pine seeds lying on the ground, and the tract totally loses its capacity for reproduction of the pine timber.

Physical Characteristics of the Tract.

The extension of the area of cultivation will go on a long time in Ontario before the lands of Algonquin Park are coveted for agriculture. The gneiss and granite of the Laurentian formation are in themselves not unfavorable foundations for a good agricultural soil; but when the covering is thin and scanty, and in many places wanting altogether, cultivation ceases to be possible. Isolated patches of tillable soil occur, it is true, but there are no large and continuous areas capable of sustaining a considerable population, or of supporting markets, schools, churches, etc., without which successful settlement is impossible. The surface is continually broken by rough, rocky ridges, which, though abrupt enough to preclude easy travelling, seldom rise to any great height. In the intervals are marshes, low-lying but dry stretches, and water in the various forms of pond, lake and river.

The watershed which separates the streams flowing into Georgian Bay from those emptying into the Ottawa lies in the south-west portion of the Park, in the townships of Peck, McLaughlin and Hunter. Here, in a comparatively small area, are found the headquarters of three important streams: the Muskoka (south branch), the Madawaska, and the Petawawa. Island Lake, in the township of McLaughlin, is the source of the first-named river, and a fifteen-minute walk

over a portage on its north-east shore leads to Little Otter Slide Lake, whose waters find their way into the Petawawa. A mile and a half from the eastern shore of Little Otter Slide Lake lie the head waters of one of the branches of the Madawaska. The Muskoka is a tributary of Georgian Bay, while the Petawawa and Madawaska fall into the Ottawa. The waters of the Muskoka traverse Lakes Huron, St. Clair and Erie, tumble over Niagara Falls, and flow through Lake Ontario and the long stretch of the upper St. Lawrence, before they mingle with those of its kindred streams at the point where "Utawas' tide" merges itself in the noblest of Canadian rivers.

The great quantity of water and the variety of the forms in which it is found, constitute one of the most characteristic features of the Park. The streams are of all sizes, from the tiniest rill to the large river capable of floating great drives of saw-logs, and the lakes vary in size from small ponds to important sheets of water, like Great Opeongo Lake on the Madawaska, the largest in the Park, which spreads its irregular body over parts of four townships, viz., Bower, Dickson, Preston and Sproule. As a consequence of this abundance of water, almost every corner of the Park may be reached by canoe, the portages from one water system to another being, as a rule, short and easy.

This ample water supply is highly advantageous to the lumberman, as it enables him to float his saw-logs, with the minimum of difficulty, from the limits on which they are cut to the place of manufacture. Other lakes of large size are the following:—McDougal and Shirley on the Madawaska; Cedar, Lavielle, Trout and Misty, on the Petawawa; Island, Canoe and Smoke on the Muskoka, and Tea, Manitou and Kioshkoqui on the Amable du Fond.

There are no lofty mountain peaks or towering ranges such as adorn Adirondack Park, in the State of New York, but there are many lesser elevations sufficient to diversify the scene, and give an added zest to the other beauties of the Park. The most elevated tract of land in this portion of Ontario is here to be found, as may be inferred from the fact that the watershed dividing the Amable du Fond and South River systems, the former a tributary of the Mattawa, and the latter of Lake Nipissing, from the east and west-bound rivers, is also comprised within the limits of the Park. Island Lake, the source of the Muskoka, is 1,405 feet above the level of the sea, and Little Otter Slide Lake, one of the beginnings of the Petawawa, lies at exactly the same height. The height of Lake Huron is 578 feet above the sea, so that the descent of the Muskoka throughout its entire length is 827 feet. The fall achieved by the Petawawa is even more considerable. The point of its junction with the Ottawa is 393 feet above high tide, and this river has therefore a total descent of 1,012 feet. It is, in consequence, like its sister the Madawaska, a rapid and turbulent stream.

Animals and Game.

"A region so wooded and watered," say the Commissioners in their report, "cannot but be the home of a vast variety of birds, game and fur-bearing animals and fish. Here, not many years ago, the moose, monarch of Canadian woods, roamed and browsed in large numbers, the leaves and tender branches of the young trees supplying him with his favorite diet; here, herds of red deer grazed in the open meadows or quenched their thirst at the brooks or crystal lakes; here, the industrious beaver felled his trees and built his dams on every stream; here, the wolf's detested howl startled the deer, and the black bear pushed his dark bulk through the undergrowth in search of ripe nuts or berries. Here, in fact, may be said to have been the centre from which the moose, deer and other animals spread out to all sections of the Province south of the Mattawa River and Lake Nipissing, the great distance from settlement and the unbroken wilderness affording them a greater degree of shelter than was found anywhere else. Of these animals, deer are still plentiful, but the increasing rigor with which they have of late years been hunted, in and out of season, is fast depleting their numbers. The same cause has bid fair to place the moose among the extinct animals of Ontario; while the beaver has been hunted and trapped so mercilessly that now single specimens are seen only at long intervals. Wolves and bears are quite common, and mink, otter, fisher, martin and muskrat are numerous. The woods are well stocked with partridge, but there are few ducks. The principal fish found in the Muskoka waters is the trout, all the fresh water varieties of which are to be had in great abundance. In the Petawawa and Madawaska rivers, in addition to trout, chub, cat-fish and pike are found, also eels, the latter varieties increasing in number as we descend the streams. Herring and white-fish are plentiful in Great Opeongo, Shirley and McDougal Lakes."

One of the objects of the Park is the protection of the game and fur-bearing animals from the extermination which elsewhere threatens them. It would be a national loss were the moose, the big game *par excellence* of our Ontario woods, allowed to become extinct, as the buffalo of the western plains has become. Yet the experience of the past shows clearly that such a fate awaits him, unless law and authority intervene with a strong hand on his behalf. It is almost incredible with what ferocity and wastefulness this animal has been hunted and killed in the past. In the spring of 1887 the carcasses of sixty moose were found in this district, the animals having been killed for their skins alone. During the preceding winter, seventy were killed between Lake Traverse and Bissett's Station on the C. P. R., a distance of twenty miles. The spring, when the young are brought forth, and when the moose stand in greatest need of protection, is just the time the pot-hunter chooses for their destruction. He shoots a moose, perhaps a female big with calf, skins it, and leaves the body on the ground as bait

for the bears, which at this time of year come forth from their long winter's retirement, too hungry to be dainty in their food. A full-grown moose weighs upwards of 1,000 lbs., and will dress 600 lbs. of beef, while his skin will make twenty pairs of moccasins, which sell at $2.00 a pair Notwithstanding the war which has been waged against the moose, they are by no means rare in the Park country, and since protection has been guaranteed them they are reported by the superintendent of the Park to be "increasing very rapidly" in numbers. By the general game laws of Ontario, no moose can lawfully be killed anywhere in the Province before 25th October, 1900.

The common red deer are yet plentiful, finding in this wilderness a refuge from the enemies which assail them on every hand during the hunting season. The complete immunity which they here enjoy from the chase makes the Park a centre from which they will spread to other parts of the Province, there to afford the hundreds of deer-slayers in Ontario the sport they so keenly enjoy. The greatest enemies of the deer are the wolves, which are very numerous in the Park, and which multiply in proportion to the increase of their prey. The Park rangers make strenuous efforts to poison these pests—the only practicable way to kill them—but their great cunning renders their destruction very difficult

In like manner, the beaver, most valuable of fur-bearing animals, has now a chance to prolong his career, ended everywhere else in Ontario south of Lake Nipissing, and all but ended even here. Trappers, both Indian and white, have pursued the beaver even more ruthlessly than the hunters have the moose, until this region, so adapted by nature to be the home of this interesting creature, contained when the Park was established but a very few scattered families. So prolific is the beaver, however, and so suitable to its habits are the ponds, creeks and lakes of the Park, that even these few remaining representatives have already been succeeded by a numerous progeny, sufficient ere long not only to re-stock the Park, but to add beaver skins to the spoils of trappers in other parts of the Province from which they have long been absent.

Other fur-bearing animals, the otter, fisher, martin, mink and muskrat, are more or less plentiful, and are also increasing in number under the protection afforded them in the Park. Besides the wolf, the bear is quite commonly met with. The former subsists upon animal diet, ranging from frogs to deer, the latter chooses by preference the less exciting regimen of nuts and berries, though he by no means rejects the carcass of a moose or deer slain by the wily hunter for his special delectation. Neither of these animals is accorded any protection by the provisions of the Park Act, being classed by it along with "wolverines, wild-cats, foxes or hawks," and other injurious or destructive animals.

Preserving the Water Supply.

Another of the ends aimed at by the establishment of the Park is even more important than the preservation of game. The conservation of so large a territory in a wooded state will strongly tend to maintain in full and equable flow the streams and rivers rising in and flowing out of the Park. It does not yet appear to be determined by scientific observers whether or not forests exercise any decided effect in the precipitation of moisture, but all are agreed that they lesson the rate at which the water—whether from rainfall or melted snow—flows from the higher to the lower levels. The surface of the forest, made up of beds of leaves, moss, decayed and decaying wood, and similar substances of a porous, spongy nature, is capable of absorbing a large quantity of moisture, and parts with it slowly and in moderation. When filled to its utmost capacity, it must of course discharge its watery contents at a rate equal to that at which it receives fresh supplies, but under ordinary circumstances the resistance offered by the forest floor to the flow of water is quite sufficient to materially retard its progress. The effect of this is to prolong the period during which the surplus water runs off, and to prevent sudden floods. On the other hand, where the forest growth has been cleared away, and the absorbent forest bed has been dried up, burned off, or converted into soil, no great impediment is presented to the flow of water, and the consequence is angry floods in winter and spring, and dried-up river courses in summer. Evaporation also acts more freely in the open than in the forest, and rivers, brooks and springs suffer great diminution in volume when the district which supplies them is exposed to the full effect of the sun's rays, untempered by forest foliage. The fierce floods which rush down untimbered hillsides after heavy rains or springtime thaws often do immense damage, not only by carrying away the fertile surface soil and exposing the colder and more sterile layers, but by cutting deep ravines and depositing the detritus on the flats below, and even by causing actual destruction of life and property.

By drying up or greatly reducing the volume of water in rivers, the removal of forests brings about great changes in social and economic conditions, and thus affects the welfare of whole provinces and even nations. In Russia, we are told, forest destruction has brought dire results. The "Mother Volga" grows yearly shallower; the Don, with its tributaries, is choked; the sources of the Dnieper creep downward, and its chief tributary, the once noble Worskla, with a flow of some 220 English miles, is now dry from source to mouth. This stream, which fertilized a broad region, supporting a numerous population, exists no more—not temporarily run dry, but with all its springs exhausted, so that in future it may be stricken from the map. Of the Bitjug, another river in the Don region, the upper course has wholly disappeared—valley and bed are filled to the bank with sand and earth.

In Prussia, where forest preservation and management is now a science, by stripping the beaches of their forests in the seventeenth and eighteenth centuries, the sea coasts have become exposed to all winds and storms. Fields once fertile have been transformed into waste sand dunes, and whole villages, whose agricultural people formerly prospered, have ceased to exist. In the middle and eastern provinces light and undulating soil has been replaced by small or large sand hills, and places where forests once stood and served to carry off stagnant moisture have been turned into marshes.

In younger America, as in older Europe, like causes are beginning to produce like results. The State of New York at one time owned some five million acres of wood-lands, covering nearly the entire area of the Adirondack and Catskill mountains, where the principal rivers of the State, especially the Hudson, take their rise. The State sold most of these lands for any price they would bring. Now that they have been largely stripped of their forest covering, and the thin soil of the mountain sides is exposed to the washing rains, it is found that the Hudson is in danger of becoming unnavigable at Albany, from the *debris* and earth carried into it.

Such warnings ought not to be lost upon us. We are already feeling the effects of the removal of the greater part of the forest growth from southern Ontario, in increased liability to floods, in the diminished volume of rivers, and in other ways, and we may be sure that an infraction of nature's laws will not go unpunished here any more than in Europe or the United States. The preservation of the forest growth, or the bulk of it, in Algonquin Park, will enable the unlessened waters of the rivers rising there to float the logs, turn the mill-wheels, and refresh the fields of succeeding generations for all time to come.

A Field for Experimental Forestry.

Another advantage of the Park will be the opportunity it will afford for the practical study of systematic forestry—a thing as yet not attempted in our province on a large scale. We have been, and still are, so busy cutting down our forests for lumber, and to make way for cultivated fields, that we have scarcely stopped to think of the rapidity with which these forests are disappearing. Yet there are already in Northern Ontario large areas of denuded pine lands, stripped by the lumberman, or devastated by fire. Can they be reforested, and made to bear a second crop of pine as valuable as the first? The task is a gigantic one, and some competent authorities are inclined to think it impracticable. Even if accomplished at great expense, what guarantee would there be that the slow growth of a hundred years would not perish by fire in a day, as it has so often done in times past? There has been little in the experience of Canada or the United States to indicate the best means to be adopted in attempting to restore the pine forests to

their original condition, and a few years' experimenting in Algonquin Park may solve a good many problems, and cast some light on the methods of reforesting most likely to be successful.

The care of the Park is in the hands of a superintendent and a staff of some four or five rangers, whose duty it is to see that no poaching or hunting is done; to prevent the outbreak and spread of fires, and generally to see that the provisions of the Park Act are enforced. The present officers of the Park are John Simpson, superintendent; Timothy O'Leary, chief ranger; Stephen Waters, C. K. Grigg, James Sawyer, D. A. Ross, rangers, and H. Cormier, cook. Their headquarters have been established on Canoe Lake, close to the line of the Ottawa, Arnprior & Parry Sound Railway, in the form of a substantial hewed-log building, 21x28 feet, with hewed timber floor and "scoop" roof. In addition to this, some thirty-three shelter huts, for the accommodation of the rangers while on patrol duty, have been built in various portions of the Park. Some of these have been formed by fitting up abandoned lumber shanties; the remainder have been literally hewn out of the forest by the staff of rangers, who are expert woodsmen and "shingle weavers." No sawn lumber whatever is used in their construction; walls, roofs, floors, beds and tables all being formed by axe and drawknife from the timber on the spot.

The smaller huts are intended to be close enough to one another to be reached in a day's journey on snowshoes in winter, and each contains a small sheet-iron stove, and a supply of provisions and bedding for the use of the rangers.

The Park staff have, in addition to their other labors, already cut out a number of portages from one reach of waters to another, and have cleared many creeks and river beds from floating brush and other rubbish, obstructive to canoe navigation. The men live in the Park the year round, and though the winter is severe and the snowfall deep, as might be expected from the comparatively high altitude of the district, little real hardship is experienced. In winter rain seldom falls, and the air is dry and invigorating.

This part of the country was long the resort of hunters and trappers, whose occupation was cut off by the establishment of the Park. Even this class however has come to acquiesce in the new state of things, and to recognize the wisdom of affording a much-needed protection to the game and fur-bearing animals of the district. So far, therefore, there has been little difficulty in enforcing the laws.

There is practically no restriction on the admission of visitors to the Park, but of course no hunting or killing of animals is allowed, and fishing may only be done by hook and line, for which a license is necessary. The point on which the greatest possible care is required is the use of fire, and every precaution is demanded to prevent damage to the timber from this cause. A single act of

carelessness in the dry season might result in the loss of millions of dollars' worth of property.

A few tourists from various parts of Ontario and the United States, who appreciate the charms of nature unadorned, are now in the habit of visiting this delightful region. As its attractions become better known, they will invite crowds of heated, tired and worried tourists to cheat the dog-days by spending them in the cool depths and silent fastnesses of this northern forest.

Regulations Respecting the Park.

Appended hereto are the regulations for the government of the Park made by Order-in-Council 7th July, 1894:

1. All visitors to the Algonquin National Park of Ontario are required to comply with the provisions of the Algonquin National Park Act (56 Vict. cap. 8) and these regulations, and it is the duty of the Superintendent of the Park and his staff of rangers to enforce the same.

2. All parties visiting the Park are required to furnish the Superintendent or rangers with their names and post office addresses, the proposed duration of their stay, the portions of the Park they intend to visit, and such other information of a like kind as they may be requested to give by the Superintendent or rangers.

3. Visitors are forbidden to cut down, take the bark off, or otherwise injure any standing timber.

4. Hunting, trapping, or taking game or other animals or birds of any kind, or fishing with net, trap, spear or night-line, is absolutely prohibited. Parties offending in this respect render themselves liable to a penalty not exceeding $100 for each offence, expulsion from the Park, and seizure and confiscation of their firearms and ammunition and traps, lines and tackle.

5. Fishing with hook and line may be practised only under permit, to be issued by the Commissioner of Crown Lands or the Superintendent of the Park. No fish may be taken for other purposes than supplying food for visitors or others within the Park, and fish, when taken, must not be carried beyond the boundaries of the Park.

6. Visitors must exercise the greatest possible care and caution in the use of fire for cooking purposes, for which purposes only may fires be lit. Where possible, fires must be kindled on bare rock, and where bare rock cannot be found, a site must be selected where there is the smallest quantity of dry or inflammable wood or other matter. Only down and decaying timber, fallen branches or driftwood may be used for firewood. Fires must not be left burning during absence from camp, and after using they must be thoroughly and completely extinguished by pouring water thereon.

7. Not more than one rifle or fowling-piece and one revolver or other firearm shall be carried by any party of visitors, and if used for hunting, shooting or molesting animals (except in self-defence), or birds, such firearms shall be liable to seizure and confiscation, as above provided.

8. No visitors will be allowed to enter the Park during the open season for moose and deer, viz., from the 20th of October to the 15th of November in any year.

The following was added by Order-in-Council of 6th June, 1896 :

No pedlar, travelling salesman, or other person, shall, except as provided by the next following clause, enter into or visit the Algonquin National Park of Ontario for the purpose of hawking, peddling or otherwise disposing of any goods, wares or commodities therein, or shall sell or dispose of any goods or wares of any kind whatsoever in the said Park ; and the Superintendent or any Park ranger may remove and exclude from the Park any such pedlar, travelling salesman, or other person so entering or visiting the Park for the purpose aforesaid, or who may have in his possession therein any such articles for sale, or may arrest and bring to trial in a summary way in the manner provided by The Algonquin National Park Act any such offender, and such offender shall, upon summary conviction, be liable to a penalty of not more than $50 for each offence, with costs, and in default of payment thereof, to imprisonment for not more than three months.

The Commissioner of Crown Lands, or the Superintendent of the Park on being duly authorized in that behalf by the said Commissioner, upon being satisfied as to the necessity or expediency thereof, and upon payment of a fee or charge therefor, to be fixed by the said Commissioner, may issue licenses to a limited number of persons of good character and standing, authorizing them to hawk and peddle within the Park such kinds of goods, wares or commodities as may be described in such license. The term of such licenses shall not be more than one year from the date thereof.

The two preceding clauses shall not apply to the sale of goods by lumbermen to their employees or workmen.

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